PSYCHIATRY POSTGRADUATE EXAMS

# Weave Study Guides

*Paper III, Specialties, Forensic and Child*

Twenty-two guides across Papers I to IV, plus the cross-paper supplement. Study notes, model answers, mnemonics, high-yield comparisons, PYQ frequency, and quick review for every topic.

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PART III

# Paper III
# Specialties, Forensic & Child

*The specialties. Child and adolescent psychiatry, forensic and the law, ECT and special topics.*

GUIDE 12 · PART III

# Child Adolescent

*Paper III · Specialties, Forensic & Child. Six study modes, from notes to quick review.*

CHAPTER 01 · CHILD ADOLESCENT

# Study Notes

**Sources:** Kaplan & Sadock's Comprehensive Textbook of Psychiatry (11th ed.), Rutter's Child and Adolescent Psychiatry (6th ed.), Lewis's Child and Adolescent Psychiatry (5th ed.)

## PART 1: ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

### 1.1 Epidemiology

- Prevalence: 5–7% in school-age children (DSM-5); 3–5% globally (ICD-11)
- Male:Female ratio childhood: 3–4:1; adult ADHD approaches 2:1 (females underdiagnosed)
- Persistence into adulthood: 60–70% retain significant symptoms; full criteria met in 40–50%
- Most common reason for psychiatric referral in children worldwide

> **EXAM PEARL**
> ADHD prevalence using DSM-5 criteria is higher than ICD-10 criteria, ICD-10 required pervasive hyperkinetic disorder (all three symptom domains + multiple settings). DSM-5 combined type is broader. This explains international prevalence differences.

### 1.2 DSM-5 Diagnostic Criteria

**Domain A, Inattention (6+ symptoms, <17 years; 5+ if ≥17 years, for ≥6 months):**

1. Often fails to give close attention to details / makes careless mistakes
2. Often has difficulty sustaining attention in tasks or play
3. Often does not seem to listen when spoken to directly
4. Often does not follow through on instructions; fails to finish tasks
5. Often has difficulty organizing tasks and activities
6. Often avoids/dislikes tasks requiring sustained mental effort
7. Often loses things necessary for tasks
8. Often easily distracted by extraneous stimuli
9. Often forgetful in daily activities

**Domain B, Hyperactivity-Impulsivity (6+ symptoms, <17; 5+ if ≥17, for ≥6 months):**

1. Often fidgets with or taps hands/feet or squirms in seat

2. Often leaves seat when remaining seated is expected
3. Often runs about or climbs in inappropriate situations
4. Often unable to play or engage in leisure activities quietly
5. Often "on the go" acting as if "driven by a motor"
6. Often talks excessively
7. Often blurts out an answer before question completed
8. Often has difficulty waiting turn
9. Often interrupts or intrudes on others

**Additional Criteria:**

- Several symptoms present before age 12 years
- Symptoms in two or more settings
- Clear interference with social, academic, or occupational functioning
- Not explained by another mental disorder

**Presentations:**

PRESENTATION · CRITERIA

**Combined (ADHD-C)** Both A and B criteria met

**Predominantly Inattentive (ADHD-I)** Only A criteria met

**Predominantly Hyperactive-Impulsive (ADHD-HI)** Only B criteria met

> EXAM PEARL
> DSM-5 changed "subtypes" to "presentations", acknowledging that presentation can shift over time. Age of onset changed from 7 to 12 years (critical difference from DSM-IV).

## 1.3 ICD-11 Classification

ICD-11 codes ADHD under 6A05:

- 6A05.0, ADHD predominantly inattentive
- 6A05.1, ADHD predominantly hyperactive-impulsive
- 6A05.2, ADHD combined presentation
- 6A05.Z, ADHD unspecified

Key ICD-11 changes from ICD-10:

- Dropped "Hyperkinetic Disorder", now aligned with ADHD terminology
- Removed mandatory combined presentation requirement
- Recognizes adult ADHD more explicitly

- Symptoms must be developmentally inappropriate and cause impairment

## 1.4 Neurobiology

**Dopaminergic-Noradrenergic Dysregulation:**

The prefrontal cortex (PFC) is the central neurobiological substrate of ADHD. The PFC mediates executive functions via pyramidal neuron networks regulated by:

- **Dopamine (D1 receptors):** Moderate stimulation optimizes PFC network firing; too little or too much impairs working memory and response inhibition
- **Norepinephrine ($\alpha$2A receptors):** Enhances signal-to-noise ratio in PFC networks; too little (stress/fatigue) shifts control to subcortical structures

**Key Neural Circuits:**

1. **Fronto-striatal circuit:** PFC → striatum → thalamus → PFC loop. Dysfunction causes impaired inhibitory control and working memory
2. **Default Mode Network (DMN):** Normally suppressed during goal-directed tasks. In ADHD, DMN fails to adequately suppress, "mind wandering" during tasks represents intrusion of DMN activity
3. **Cerebellum:** Timing deficits in ADHD linked to cerebellar-striatal circuit dysfunction

**Structural Brain Findings (meta-analyses):**

- Reduced total brain volume (3–5% smaller)
- Smaller caudate nucleus (most consistent finding; normalizes with treatment)
- Thinner cortex in PFC, especially right hemisphere
- Delayed cortical maturation by ~3 years (Shaw et al., 2007)
- Right inferior frontal cortex and anterior cingulate most affected

**Genetics:**

- Heritability: 70–80% (twin studies)
- Candidate genes: DAT1 (dopamine transporter), DRD4 7-repeat allele, DRD5, SNAP25, COMT Val158Met
- No single gene explains >5% of variance, polygenic architecture
- Copy number variants (CNVs) found in ~15% of clinical ADHD cases

> **EXAM PEARL**
> The DRD4 7-repeat allele is associated with novelty-seeking and ADHD. It is also linked to better response to environmental enrichment, the "differential susceptibility" model (Belsky). This is testable.

## 1.5 Assessment

**Clinical Interview Components:**

- Developmental history (prenatal, perinatal, postnatal)
- Academic history (school reports, teacher observations)
- Behavioral history across settings
- Family history of ADHD/learning disabilities
- Medical history: thyroid disease, hearing/vision, lead exposure, seizures
- Medication history
- Psychiatric comorbidities

**Rating Scales:**

| SCALE | RATER | AGE RANGE | SUBSCALES | NOTES |
|---|---|---|---|---|
| **Conners Rating Scale-3** | Parent/Teacher/Self | 6–18 | Inattention, Hyperactivity, Executive Function, Learning Problems, Peer Relations | Gold standard, normative data |
| **SNAP-IV** | Parent/Teacher | 6–17 | ADHD-I, ADHD-H/I, ODD | Free, based directly on DSM criteria |
| **Vanderbilt ADHD Scale** | Parent/Teacher | 6–12 | ADHD + comorbid ODD/CD/Anxiety/Depression screening | Used in US primary care |
| **CBCL (Achenbach)** | Parent | 1.5–18 | Broadband (internalizing/externalizing) | Not ADHD-specific |
| **Brown ADD Rating Scales** | Self/Parent | 3 years+ | Executive function focus | Useful for adult ADHD |
| **ADHD Rating Scale-5** | Parent/Teacher | 5–17 | Inattention, Hyperactivity-Impulsivity | DSM-5 aligned |

**Neuropsychological Testing:**

- Continuous Performance Tests (CPT): TOVA, Conners CPT, measures sustained attention, impulsivity
- Working memory: WISC-V Working Memory Index
- Processing speed: WISC-V Processing Speed Index

- Executive function: BRIEF (Behavior Rating Inventory of Executive Function)

> **CLINICAL ANCHOR**
> Rating scales are NOT diagnostic alone, diagnosis requires clinical interview, history, and impairment across settings. A Conners score below threshold does not rule out ADHD.

## 1.6 Pharmacotherapy

**First-Line: Stimulants**

| MEDICATION | CLASS | MECHANISM | ONSET | DURATION | KEY POINTS |
|---|---|---|---|---|---|
| **Methylphenidate (MPH)** | Phenethylamine | Blocks DAT + NET reuptake | 30–60 min | IR: 4–6h; LA: 8–12h | Most evidence in children; multiple formulations |
| **Amphetamine (AMP)** | Phenethylamine | Blocks DAT/NET + causes release | 30–60 min | IR: 4–5h; LA: 10–12h | Slightly more potent than MPH |
| **Lisdexamfetamine (LDX)** | Prodrug | Cleaved to d-amphetamine in gut | 60–90 min | 12–14h | Lower abuse potential; FDA-approved binge eating |
| **Dexmethylphenidate** | Phenethylamine | Pure d-enantiomer of MPH | 30–45 min | IR: 4–5h; XR: 8–12h | Fewer side effects than racemic MPH |

**Methylphenidate formulations:**

- Ritalin (IR): 5/10/20mg, 2–3x/day
- Ritalin LA: 20/30/40mg, once daily
- Concerta (OROS-MPH): 18/27/36/54mg, once daily, 22% IR + 78% LA via osmotic pump
- Medikinet XL: Bimodal release
- Quillivant: Liquid methylphenidate

**Stimulant Side Effects:**

- Appetite suppression (most common, morning)
- Insomnia (take earlier, reduce evening dose)
- Growth suppression (0.5–1 cm/year, drug holidays may help)
- Cardiovascular: modest HR/BP increase; screen for congenital heart disease before starting
- Rebound phenomenon (mood/behavioral worsening as medication wears off)

- Tics (controversial, may unmask rather than cause; reassess periodically)

> **EXAM PEARL**
> Growth suppression with stimulants is modest (0.5–1 cm/year) and partially recovers. Drug holidays (weekends/summers) used in some cases but evidence is mixed, not recommended routinely as benefit of continuous treatment often outweighs growth concern.

**Second-Line: Non-stimulants**

| MEDICATION | CLASS | MECHANISM | ONSET | KEY POINTS |
|---|---|---|---|---|
| **Atomoxetine** | NRI | Selective NET inhibitor | 4–6 weeks for full effect | Non-scheduled; good for anxiety comorbidity, tic disorders; black box suicidality warning |
| **Guanfacine ER** | $\alpha$2A agonist | PFC $\alpha$2A receptor agonist | 2–4 weeks | Also for tics; can cause sedation/bradycardia; taper on discontinuation |
| **Clonidine ER** | $\alpha$2 agonist (non-selective) | Reduces NE turnover | 2–4 weeks | More sedating than guanfacine; also for tics, sleep problems |
| **Bupropion** | NDRI | NE/DA reuptake inhibitor | 2–4 weeks | Off-label; good for comorbid depression; lowers seizure threshold |

**Atomoxetine Dosing:**

- <70kg: Start 0.5 mg/kg/day, titrate to 1.2 mg/kg/day target (max 1.4 mg/kg/day)
- >70kg: Start 40mg/day, titrate to 80–100mg/day
- Take with/after food to reduce GI side effects
- Hepatotoxicity: rare but monitor LFTs if symptoms emerge

> **EXAM PEARL**
> Atomoxetine takes 4–6 weeks to achieve full effect (unlike stimulants which work same day). This must be explained to families. The black box warning for suicidal ideation is the same as SSRIs, monitor closely in first 4 weeks.

## 1.7 Behavioral Interventions

**Behavioral Parent Training (BPT):**

- First-line for preschool ADHD (age 4–5)
- Programs: Triple P, Incredible Years, Parent-Child Interaction Therapy (PCIT)
- Components: positive attention, reward systems, consistent consequences, planned ignoring

**School-Based Interventions:**

- Classroom accommodations: preferential seating, extended time, reduced workload, frequent breaks
- Daily Report Cards (DRC): home-school communication system
- Classroom behavior management: token economy, response cost

**Multimodal Treatment:**

- MTA (Multimodal Treatment of ADHD) study: medication + behavioral therapy superior to either alone for comorbid anxiety; medication alone equivalent to combined treatment for core ADHD symptoms in children without comorbidity
- Long-term: combined treatment advantage dissipates over years, naturalistic follow-up

> **EXAM STRATEGY**
> MTA study is frequently tested. Key findings: (1) Medication superior to behavioral treatment for core ADHD symptoms, (2) Combined treatment best for anxiety comorbidity and parent satisfaction, (3) Long-term advantages of medication diminish by 3-year follow-up.

## 1.8 Adult ADHD

- Prevalence: 2.5–4% adults
- Phenotype shifts: hyperactivity becomes internal restlessness, organizational problems become prominent
- High comorbidity: MDD (30%), anxiety (50%), SUD (40–50%)
- Diagnosis: requires childhood onset (before 12), DSM-5 threshold lowered to 5 symptoms
- Treatment: stimulants effective; atomoxetine FDA-approved; non-stimulants for comorbidities
- Occupational impact: underemployment, job loss, multiple jobs

## 1.9 ADHD in Women

Historically underdiagnosed due to:

- More inattentive presentation (ADHD-I more common in females)
- Better social masking/camouflaging
- Teacher referrals biased toward hyperactive boys
- Less disruptive behavior leading to less concern

Special considerations:

- Hormonal fluctuation (estrogen → dopamine → ADHD symptom severity waxes with low estrogen phases, premenstrual, perimenopause)
- Pregnancy: stimulants generally held; non-pharmacological approaches emphasized
- Comorbid eating disorders, anxiety, depression more common than males

### 1.10 Driving and Occupational Implications

- ADHD associated with 2–4x increased motor vehicle accidents
- Response time, sustained attention, and risk-taking behavior impaired
- Medication reduces accident risk significantly (Chang et al., 2014, large Swedish registry study)
- Occupational: more job changes, conflicts with supervisors, underperformance relative to IQ

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## PART 2: AUTISM SPECTRUM DISORDER (ASD)

### 2.1 DSM-5 Diagnostic Criteria

**Criterion A, Persistent deficits in social communication and social interaction (all three must be present):**

1. Deficits in social-emotional reciprocity (abnormal social approach, failure of conversation, reduced sharing of interests/emotions, failure to initiate/respond to interactions)
2. Deficits in nonverbal communicative behaviors (poorly integrated verbal/nonverbal communication, abnormalities in eye contact/body language, deficits in understanding/use of gestures, absence of facial expressions)
3. Deficits in developing, maintaining, and understanding relationships (difficulty adjusting behavior to context, difficulty making friends, absence of interest in peers)

**Criterion B, Restricted, Repetitive Behaviors and Interests (RRBIs), at least 2 of 4:**

1. Stereotyped or repetitive motor movements, use of objects, or speech (motor stereotypies, lining up toys, echolalia, idiosyncratic phrases)
2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns (extreme distress at small changes, rigid thinking, greeting rituals, same food every day)
3. Highly restricted, fixated interests abnormal in intensity or focus (strong attachment to unusual objects, preoccupation with narrow topics)
4. Hyper- or hyporeactivity to sensory input (apparent indifference to pain/temperature, adverse responses to specific sounds/textures, excessive smelling/touching, visual fascination)

**Additional Criteria:**

- Symptoms present in early developmental period (may not manifest until social demands exceed limited capacities)
- Symptoms cause clinically significant impairment
- Not better explained by intellectual disability or global developmental delay (ID and ASD can be comorbid)

## 2.2 Severity Levels

| LEVEL | SOCIAL COMMUNICATION | RESTRICTED/REPETITIVE BEHAVIORS |
|---|---|---|
| **Level 1, "Requiring support"** | Noticeable deficits without support; difficulty initiating interactions | Inflexibility causes significant interference; difficulty switching between activities |
| **Level 2, "Requiring substantial support"** | Marked deficits; limited initiation; atypical/reduced responses | RRBIs + inflexibility markedly obvious; distress when interrupted |
| **Level 3, "Requiring very substantial support"** | Severe deficits; very limited initiation; minimal response | Extreme difficulty with change; intense distress; greatly interferes with functioning |

> **EXAM PEARL**
> Severity levels in ASD are NOT a longitudinal spectrum, level 1 doesn't automatically become level 3. They describe current support needs. Intellectual disability is a separate comorbidity, not captured by ASD level.

## 2.3 Early Signs and Red Flags

**12-month red flags:**

- No babbling
- No pointing, waving, or other gestures
- No response to name

**18-month red flags:**

- No single words
- Not following simple directions
- No pretend play

**24-month red flags:**

- No spontaneous two-word phrases (not echolalic)
- Any regression in language/social skills at any age

**Additional early signs:**

- Unusual visual inspection of objects
- Reduced joint attention (not following another's gaze/pointing)
- Lack of social smile in response to others
- Preference for objects over people
- Unusual sensory interests (sniffing, spinning)
- Distress at routine changes

## 2.4 Screening

**M-CHAT-R/F (Modified Checklist for Autism in Toddlers, Revised with Follow-Up):**

- Age: 16–30 months
- 20 yes/no questions for parents
- Scoring: Low risk (0–2), Medium risk (3–7, do follow-up interview), High risk (8–20)
- Sensitivity ~91%, specificity ~95% after follow-up interview
- Used in routine developmental surveillance

**Other Screening Tools:**

| TOOL | AGE | RATER | NOTES |
|---|---|---|---|
| **M-CHAT-R/F** | 16–30 months | Parent | Primary screening |
| **CHAT (Checklist for Autism in Toddlers)** | 18 months | Parent + clinician | Original Baird tool |
| **SCQ (Social Communication Questionnaire)** | 4+ years | Parent | Screening, uses ADI-R items |
| **ASSQ (Autism Spectrum Screening Questionnaire)** | 7–16 years | Parent/Teacher | For higher-functioning ASD |
| **AQ (Autism Quotient)** | Adolescents/Adults | Self-report | Baron-Cohen |

## 2.5 Comprehensive Assessment

**Diagnostic Instruments:**

**ADOS-2 (Autism Diagnostic Observation Schedule, 2nd Ed):**

- Gold standard observational assessment
- Structured observation of social behavior
- 5 modules: Toddler Module (12–30 months, non-verbal), Module 1 (non-verbal/limited verbal), Module 2 (phrase speech), Module 3 (fluent verbal children/adolescents),

Module 4 (adults)

- Trained administration required
- Generates Social Affect score + Restricted/Repetitive Behavior score

**ADI-R (Autism Diagnostic Interview-Revised):**

- Structured parent interview
- ~90–120 minutes
- Three domains: Social interaction, Communication, Repetitive/Stereotyped behaviors
- Algorithms different for "current" and "ever"
- Best used with ADOS-2 for comprehensive assessment

> **EXAM PEARL**
> The "Gold Standard" diagnosis of ASD uses ADOS-2 + ADI-R together. Neither alone is sufficient for a definitive diagnosis. ADOS-2 captures current behavior; ADI-R captures developmental history.

**Assessment Battery:**

- Cognitive: Mullen Scales (infants), Leiter-3 (non-verbal), WISC-V (school age)
- Adaptive: Vineland Adaptive Behavior Scales (VABS-3)
- Language: CELF, Preschool Language Scales (PLS)
- Sensory: Sensory Profile (Dunn)
- Occupational therapy assessment
- Medical: genetics (chromosomal microarray), metabolic screen, hearing test, EEG (if seizure concern)

## 2.6 Comorbidities

| COMORBIDITY | PREVALENCE IN ASD | NOTES |
|---|---|---|
| **Intellectual Disability** | 30–40% | Higher at lower severity levels; separate diagnosis required |
| **Epilepsy** | 20–30% | Bimodal: onset <5 years and adolescence; particularly with ID comorbidity |
| **ADHD** | 50–70% | DSM-5 now allows dual diagnosis (previously excluded) |
| **Anxiety Disorders** | 40–60% | Often atypical presentation; social anxiety, generalized anxiety, specific phobias |
| **Depression** | 20–40% | Higher in higher-functioning ASD; often missed |

| COMORBIDITY | PREVALENCE IN ASD | NOTES |
|---|---|---|
| Sleep Disorders | 50–80% | Insomnia, night waking; melatonin dysregulation |
| OCD | 17–37% | Distinguish from ASD RRBIs, ego-syntonic vs ego-dystonic |
| GI Problems | 50% | Constipation, GERD, feeding problems |
| Tic Disorders | 20–35% | May co-occur with Tourette's |

## 2.7 Interventions

**Applied Behavior Analysis (ABA):**

- Based on Skinnerian operant conditioning
- Discrete Trial Training (DTT): structured, adult-led, table-based skill acquisition
- Natural Environment Teaching (NET): skills taught in context
- Pivotal Response Training (PRT): targets pivotal behaviors (motivation, self-initiation)
- Evidence: strong for skill acquisition; concerns about intensity and child-led approaches
- Lovaas model: 40h/week intensive early intervention

**Early Start Denver Model (ESDM):**

- Developmentally informed + ABA-based hybrid
- Age: 12–60 months
- Adult follows child's lead; relationship-based
- 20–25h/week optimal
- Strong RCT evidence (Dawson et al., 2010): higher developmental gains vs treatment as usual

**TEACCH (Treatment and Education of Autistic and Communication-Handicapped Children):**

- Structured Teaching approach
- Visual supports, work systems, physical organization
- Less intensive; fits classroom/home
- Emphasizes predictability and visual information

**Social Skills Training:**

- Social Stories (Gray): scenarios written from child's perspective to explain social situations
- PEERS (Program for the Education and Enrichment of Relational Skills): UCLA; adolescents/adults; RCT evidence

CLINICAL ANCHOR

Early intervention (before age 3) has strongest evidence, neural plasticity window. Regardless of which specific program, intensity and child-centered approach are the key variables.

### 2.8 Pharmacotherapy for ASD Comorbid Symptoms

| TARGET SYMPTOM | MEDICATION | EVIDENCE LEVEL |
|---|---|---|
| **Irritability/aggression** | Risperidone (FDA-approved age 5+), Aripiprazole (FDA-approved age 6+) | Strongest (multiple RCTs) |
| **ADHD symptoms** | Methylphenidate (lower response rate than non-ASD ADHD), Atomoxetine, Guanfacine | Moderate |
| **Anxiety** | SSRIs (fluoxetine, sertraline), limited RCT evidence in ASD | Limited |
| **Insomnia** | Melatonin (start 0.5–3mg) | Good for sleep onset |
| **Self-injurious behavior** | Naltrexone (adjunct), antipsychotics | Limited |
| **Repetitive behaviors** | SSRIs, mixed evidence | Limited / conflicting |

EXAM PEARL

Risperidone and aripiprazole are the ONLY FDA-approved medications for ASD, specifically for irritability, aggression, and self-injurious behavior. No medication improves core social communication deficits.

### 2.9 Asperger's Disorder → ASD Transition

- Asperger's was a separate DSM-IV diagnosis: ASD features + normal language development + IQ ≥70
- DSM-5 eliminated Asperger's, subsumed into ASD Level 1
- ICD-11 also discontinued Asperger's
- Clinically: Asperger's = ASD Level 1, "without intellectual or language impairment"
- The terminology shift is frequently tested

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## PART 3: INTELLECTUAL DISABILITY (ID)

### 3.1 Definition and Classification

**DSM-5:** Three criteria:

1. Deficits in intellectual functions (reasoning, problem-solving, planning, abstract thinking, judgment, academic learning, learning from experience) confirmed by clinical assessment AND standardized intelligence testing
2. Deficits in adaptive functioning that fail to meet developmental/sociocultural standards for personal independence and social responsibility (across conceptual, social, and practical domains)
3. Onset during developmental period

**IQ Score Reference (NOT severity determinant in DSM-5):**

- Mild: IQ 50–69
- Moderate: IQ 35–49
- Severe: IQ 20–34
- Profound: IQ <20

> EXAM PEARL
> DSM-5 CRITICAL CHANGE: Severity in DSM-5 is determined by ADAPTIVE FUNCTIONING, not IQ score. A person with IQ 55 may have mild or moderate ID depending on adaptive functioning. ICD-11 aligns with this. IQ scores alone are insufficient.

**ICD-11 Classification (6A00):**

- 6A00.0, Mild (previously IQ 50–69)
- 6A00.1, Moderate (previously IQ 35–49)
- 6A00.2, Severe (previously IQ 20–34)
- 6A00.3, Profound (previously IQ <20)
- Note: ICD-11 emphasizes functional descriptors, not IQ alone

## 3.2 Adaptive Functioning Domains

| DOMAIN · SKILLS INCLUDED | |
|---|---|
| **Conceptual** | Language, reading, writing, math, reasoning, knowledge, memory |
| **Social** | Empathy, social judgment, interpersonal communication, following rules, gullibility |
| **Practical** | Self-care, job responsibilities, money management, recreation, task organization |

## 3.3 Etiology

**Genetic Causes:**

| CONDITION | GENETICS | CLINICAL FEATURES | IQ RANGE |
|---|---|---|---|
| **Down Syndrome (Trisomy 21)** | Trisomy 21 (95%), Robertsonian translocation (4%), Mosaic (1%) | Flat facies, upslanting palpebral fissures, epicanthal folds, single palmar crease, hypotonia, cardiac defects (ASD/VSD), Alzheimer's (after 40) | Mild–Moderate |
| **Fragile X Syndrome** | CGG repeat expansion in FMR1 gene (Xq27.3); males affected | Long face, large ears, macro-orchidism, hand flapping, ADHD features, social anxiety, hyperkinesis | Mild–Moderate (males); females often normal–mild ID |
| **Angelman Syndrome** | Maternal UPD 15 or deletion | Happy demeanor, seizures, ataxic gait, absent/minimal speech, EEG pattern | Severe–Profound |
| **Prader-Willi Syndrome** | Paternal deletion 15q11 | Hyperphagia, obesity, short stature, hypogonadism, behavioral problems | Mild–Moderate |
| **Phenylketonuria (PKU)** | PAH gene mutation; AR | Preventable with dietary phenylalanine restriction; musty odor, fair complexion, seizures | Severe (if untreated) |
| **Williams Syndrome** | Deletion 7q11.23 (includes elastin gene) | "Cocktail party" personality, hypercalcemia, elfin facies, supravalvular aortic stenosis, relative strength in verbal/social over spatial | Mild–Moderate |
| **Rett Syndrome** | MECP2 mutation (X-linked); females | Regression at 6–18 months, hand-wringing stereotypies, breathing abnormalities, seizures | Severe |
| **Tuberous Sclerosis** | TSC1/TSC2 mutation; AD | Hamartomas (brain, skin, kidneys), ash-leaf spots, seizures, ASD features | Variable |

> **EXAM PEARL**
>
> Fragile X is the most common INHERITED cause of intellectual disability. Down syndrome is the most common chromosomal cause. PKU is the most common PREVENTABLE metabolic cause.

**Acquired Causes:**

- Prenatal: rubella, CMV, toxoplasmosis, alcohol (FASD, leading preventable cause in developed countries), hypothyroidism, maternal PKU, radiation
- Perinatal: prematurity, birth asphyxia, hypoglycemia
- Postnatal: meningitis/encephalitis, head trauma, lead poisoning, severe deprivation

## 3.4 Assessment of Intellectual Disability

**Intelligence Tests:**

- Wechsler Preschool and Primary Scale (WPPSI-IV): 2.5–7 years
- Wechsler Intelligence Scale for Children (WISC-V): 6–16 years
- Stanford-Binet 5 (SB5): 2–85 years
- Leiter-3: non-verbal; suitable for non-English speakers, hearing impaired, ASD

**Adaptive Behavior Scales:**

- Vineland Adaptive Behavior Scales-3 (VABS-3): standard for clinical/research
- Adaptive Behavior Assessment System-3 (ABAS-3)
- AAMR Adaptive Behavior Scale (ABS)

## 3.5 Behavioral Phenotypes

SYNDROME · BEHAVIORAL PROFILE

**Down Syndrome** Sociable, affectionate, stubbornness, risk for depression/dementia in adulthood

**Fragile X** Social anxiety, gaze avoidance, perseverative speech, hand-flapping

**Angelman** Happy affect, sociable, laughing, easily excitable

**Prader-Willi** Hyperphagia, skin-picking, rigidity, temper tantrums, hoarding

**Williams** Loquacious, socially uninhibited, hypersensitive to noise, visuospatial deficits

**Rett** Initial development then regression; loss of purposeful hand use

## 3.6 Comorbid Psychiatric Disorders in ID

- Prevalence of psychiatric disorder in ID: 30–40% (3–4x higher than general population)

- Diagnostic overshadowing: psychiatric symptoms attributed to ID rather than recognized as separate disorder
- Communication impairment makes diagnosis challenging
- Modified diagnostic criteria (DC-LD in UK) developed for this population

**Common presentations:**

- ADHD: most common behavioral disorder in ID
- Anxiety: often presents as increased behavioral disturbance
- Depression: may present as self-injurious behavior, appetite/sleep changes, withdrawal
- Psychosis: lifetime prevalence 3x higher; positive symptoms less systematized
- Stereotypic movement disorder (especially severe/profound ID)

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# PART 4: CONDUCT DISORDER AND OPPOSITIONAL DEFIANT DISORDER

## 4.1 Oppositional Defiant Disorder (ODD)

**DSM-5 Criteria:** Pattern of angry/irritable mood, argumentative/defiant behavior, or vindictiveness lasting ≥6 months (≥4 symptoms from at least 1 category):

**Angry/Irritable Mood:**

1. Often loses temper
2. Often touchy or easily annoyed
3. Often angry and resentful

**Argumentative/Defiant Behavior:**

1. Often argues with authority figures
2. Often actively defies/refuses to comply with rules
3. Often deliberately annoys others
4. Often blames others for mistakes

**Vindictiveness:**

1. Spiteful/vindictive at least twice in past 6 months

Severity: Mild (one setting), Moderate (two settings), Severe (three+ settings)

ODD Specifier, Limited Prosocial Emotions (Callous-Unemotional traits):

- Lack of remorse/guilt
- Callousness/lack of empathy
- Unconcerned about performance
- Shallow/deficient affect

> **EXAM PEARL**
>
> The "Limited Prosocial Emotions" specifier in ODD (and CD) identifies callous-unemotional (CU) traits. This is clinically important, CU traits predict worse prognosis, poorer response to standard behavioral interventions, and greater risk for adult psychopathy. Treatment modifications needed.

### 4.2 Conduct Disorder (CD)

**DSM-5 Criteria:** Repetitive pattern of behavior violating rights of others or societal norms, at least 3 criteria in past 12 months (at least 1 in past 6 months) from four categories:

**Aggression to people/animals (7 criteria):**

- Bullies, threatens, intimidates others
- Initiates physical fights
- Used weapon that can cause serious physical harm
- Physically cruel to people
- Physically cruel to animals
- Stolen while confronting victim (mugging, purse-snatching)
- Forced sexual activity

**Destruction of property (2 criteria):**

- Deliberately set fires
- Deliberately destroyed others' property

**Deceitfulness/theft (3 criteria):**

- Broken into building/car/house
- Lies to obtain goods/favors
- Stolen items without confronting victim (shoplifting)

**Serious violations of rules (3 criteria):**

- Stays out at night despite parental prohibition (before age 13)
- Run away from home overnight at least twice
- Truant from school (before age 13)

**Specifiers:**

- Childhood-onset type (before 10): worse prognosis, more male, often with ADHD
- Adolescent-onset type: more female, better prognosis, peer-influenced
- Unspecified onset
- Limited Prosocial Emotions: as above

**Severity:** Mild, Moderate, Severe

## 4.3 Differential Diagnosis: ADHD vs ODD vs CD

| FEATURE | ADHD | ODD | CD |
|---|---|---|---|
| **Core behavior** | Inattention/hyperactivity | Defiance/irritability | Rule violation/aggression |
| **Intentionality** | Unintentional | Deliberate but reactive | Deliberate and planned |
| **Comorbidity** | Can have ODD/CD | Often with ADHD | Often with ADHD |
| **Aggression** | Reactive, unplanned | Reactive to perceived provocation | Proactive/predatory possible |
| **Conscience development** | Normal | Normal | May be impaired (CU traits) |
| **Peer relationships** | Difficulty due to impulsivity | Difficulty due to defiance | May have delinquent peer group |

> **EXAM PEARL**
> ODD and CD are comorbid with ADHD in 30–50% of cases. When all three co-occur, treat ADHD first, behavioral problems often improve. CD without ADHD typically has intact working memory.

## 4.4 Risk Factors for CD

**Individual:** male sex, ADHD, low IQ, callous-unemotional traits, impulsivity, early behavioral problems, reading difficulties

**Family:** parental antisocial personality, substance abuse, domestic violence, harsh/inconsistent discipline, child abuse/neglect, large family size, low socioeconomic status

**Peer:** association with deviant peers (particularly adolescent-onset CD)

**Community:** neighborhood violence, poverty, poor school environment

## 4.5 Management of CD/ODD

**Behavioral:**

- Parent Management Training (PMT): Strongest evidence, Patterson Oregon Social Learning Model, Webster-Stratton's Incredible Years
- Multisystemic Therapy (MST): community-based, addresses family/school/peers simultaneously; best evidence for serious antisocial behavior in adolescents
- Functional Family Therapy (FFT): family-based
- Problem-Solving Skills Training (PSST)

**Pharmacological:**

- No specific medication for CD/ODD
- Treat comorbid ADHD (stimulants reduce aggression significantly)
- Mood stabilizers (lithium, valproate): for severe impulsive aggression
- Atypical antipsychotics: risperidone for severe, treatment-refractory aggression
- SSRIs: for comorbid anxiety/depression

> **EXAM STRATEGY**
> MST (Multisystemic Therapy) is the evidence-based gold standard for adolescent CD with serious antisocial behavior. It is community-based, addresses multiple systems simultaneously (Bronfenbrenner ecological model), and has RCT support.

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# PART 5: CHILDHOOD ANXIETY AND DEPRESSION

## 5.1 Separation Anxiety Disorder

**DSM-5 Criteria:** Developmentally inappropriate and excessive fear/anxiety concerning separation from attachment figures, at least 3 symptoms for ≥4 weeks (children; ≥6 months adults):

1. Recurrent excessive distress when anticipating/experiencing separation
2. Persistent worrying about losing attachment figures or possible harm (illness, injury, disaster)
3. Persistent worrying about untoward event causing separation (getting lost, kidnapped)
4. Reluctance/refusal to go out, away from home, to school due to fear of separation
5. Persistent excessive fear about being alone
6. Persistent reluctance/refusal to sleep away from home
7. Repeated nightmares involving separation theme
8. Repeated somatic complaints when separation occurs/anticipated

**Most common anxiety disorder in young children (under 12)**

Treatment:

- First-line: CBT (exposure hierarchy, cognitive restructuring, relaxation)
- Medication if moderate-severe: sertraline, fluoxetine
- Family involvement essential, parental accommodation (enabling avoidance) is a key maintenance factor

## 5.2 Selective Mutism

**DSM-5:** Consistent failure to speak in specific social situations despite speaking in others (typically speaks at home, mute at school/social settings) for ≥1 month (not limited to first month of school).

- Most commonly presents at school entry (age 5–6)
- Distinct from language disorder, can speak normally in comfortable settings
- Likely extreme social anxiety rather than a separate anxiety disorder
- Strong overlap with social anxiety disorder

**Treatment:**

- Behavioral: stimulus fading, shaping, positive reinforcement
- Gradual exposure: whisper → record voice → speak to trusted adult → small group
- SSRI (fluoxetine most evidence) for moderate-severe cases
- School consultation essential

## 5.3 School Refusal

Not a DSM diagnosis, a behavioral problem with multiple causes:

| TYPE | CAUSE | FEATURES |
|---|---|---|
| **Separation anxiety** | Fear of leaving home/attachment figure | Somatic complaints (morning), relieved on staying home |
| **Social/performance anxiety** | Fear of social situations, evaluation | Avoids specific situations (tests, PE, lunch) |
| **Specific phobia** | Fear of specific school stimuli | Avoidance of specific classroom/teacher |
| **Truancy/CD** | Desire to be elsewhere | No distress, leaves home but not school-bound |

**Kearney & Silverman (2000) functional model:**

1. Avoid stimuli provoking negative affect
2. Escape aversive social/evaluative situations
3. Pursue attention from significant others
4. Pursue tangible reinforcement outside school

Treatment: Rapid return to school (even partial attendance) is critical, prolonged absence worsens prognosis. CBT, family therapy, school liaison.

## 5.4 Pediatric Depression

**Clinical features:**

- Similar to adult depression but with developmentally unique features:
- Irritable mood may substitute for depressed mood (in children especially)
- More somatic complaints
- Cognitive distortions tend to be developmentally simpler

- Social withdrawal, school refusal
- Anhedonia may manifest as boredom

**Treatment, TADS (Treatment for Adolescents with Depression Study):**

- Fluoxetine alone: 61% response
- CBT alone: 43% response
- Combination: 71% response (superior)
- Placebo: 35% response

> EXAM PEARL
> TADS is the landmark study for pediatric depression treatment. Combined fluoxetine + CBT is most effective. Fluoxetine is the only FDA-approved antidepressant for depression in children (age 8+). Escitalopram FDA-approved for adolescents (12+).

**Black Box Warning:** All antidepressants carry FDA black box warning for increased suicidal ideation in children and adolescents. This does NOT mean risk of completed suicide, actual completed suicide risk is reduced with treatment. The warning led to underprescription, which is its own problem.

### 5.5 Suicidality in Children

- Suicidal ideation: ~10–15% of adolescents
- Suicide attempt: ~8% adolescents
- Completed suicide: 3rd leading cause of death in 15–24 age group (US)
- Methods in children: less lethal on average; cognitive concreteness limits planning
- Risk factors: depression, previous attempt, family history, substance use, bullying, LGBTQ+ youth, impulsivity
- Protective factors: family support, school connectedness, help-seeking

**Assessment: Columbia Suicide Severity Rating Scale (C-SSRS)**

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## PART 6: TIC DISORDERS AND TOURETTE SYNDROME

### 6.1 Classification

DISORDER · CRITERIA

**Tourette Syndrome** ≥2 motor tics AND ≥1 vocal tic; not necessarily concurrent; onset <18; duration >1 year; not substances/medical

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**Persistent (Chronic) Motor/Vocal Tic Disorder** Single or multiple motor OR vocal tics (not both); >1 year duration

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**Provisional Tic Disorder** Single or multiple motor and/or vocal tics; <1 year since first tic

**Tic characteristics:**

- Sudden, rapid, recurrent, nonrhythmic
- Motor: simple (eye blinking, nose wrinkling) or complex (gestures, echopraxia, copropraxia)
- Vocal: simple (sniffing, throat clearing) or complex (echolalia, palilalia, coprolalia)
- Coprolalia (uttering obscene words): present in <10–15% of Tourette's, NOT required for diagnosis
- Premonitory urge: sensation before tic that is relieved by performing the tic
- Can suppress temporarily (at cost of discomfort)
- Wax and wane; worse with stress, fatigue, excitement

> EXAM PEARL
> Coprolalia is NOT required for Tourette diagnosis. It is present in only 10–15% of cases. This is a very common misconception tested in exams.

## 6.2 Epidemiology

- Tourette prevalence: 0.3–1% children
- Male:Female: 4:1
- Peak severity: 10–12 years; typically improves in adolescence/adulthood
- Comorbidities: ADHD (50–60%), OCD (30–50%), anxiety (30%), depression (25%)

## 6.3 Neurobiology

- Cortico-striato-thalamo-cortical (CSTC) circuit dysfunction
- Dopaminergic excess in striatum
- Glutamatergic and GABAergic dysregulation

## 6.4 Treatment

**Behavioral, CBIT (Comprehensive Behavioral Intervention for Tics):**

- First-line for mild-moderate tics
- Components: Habit Reversal Training (HRT) + functional intervention
- HRT: awareness training → competing response training → social support
- RCT evidence: superior to supportive therapy (Wilhelm et al., 2012)

**Pharmacotherapy:**

| MEDICATION | CLASS | NOTES |
|---|---|---|
| **Haloperidol** | Typical antipsychotic | Most evidence; effective but side effects (EPS, tardive dyskinesia) limit use |
| **Pimozide** | Typical antipsychotic | QTc prolongation monitoring needed |
| **Fluphenazine** | Typical antipsychotic | Less studied |
| **Risperidone** | Atypical antipsychotic | Better tolerated; moderate efficacy |
| **Aripiprazole** | Atypical antipsychotic | Increasingly preferred; good tolerability |
| **Clonidine** | $\alpha$2 agonist | Particularly useful when ADHD comorbid; modest tic reduction |
| **Guanfacine** | $\alpha$2A agonist | Similar to clonidine; less sedating |
| **Topiramate** | Antiepileptic | Some evidence |
| **Tetrabenazine** | VMAT2 inhibitor | Severe tics; watch for depression |

> **EXAM STRATEGY**
> Current preference: start with CBIT. If medication needed, aripiprazole or clonidine/guanfacine (especially with comorbid ADHD) before haloperidol. Haloperidol has most evidence but worst side effects, exam may ask which has most evidence (haloperidol) vs current clinical preference (aripiprazole).

# PART 7: ENURESIS AND ENCOPRESIS

## 7.1 Enuresis

**DSM-5 Criteria:**

- Repeated voiding of urine into bed or clothes (involuntary or intentional)
- At least twice weekly for at least 3 consecutive months OR significant distress/impairment
- Chronological age ≥5 years (or developmental equivalent)
- Not due to substance or medical condition

**Types:**

- **Nocturnal only:** Most common; during sleep

- **Diurnal only:** Daytime; often with urgency; evaluate for urological cause
- **Nocturnal and diurnal:** Both

**Primary vs Secondary:**

- Primary: Never established continence (for >6 consecutive months)
- Secondary: Onset after at least 6 months of continence

> **EXAM PEARL**
> Secondary enuresis (onset after established dryness) warrants more vigorous evaluation for organic causes (UTI, diabetes mellitus, diabetes insipidus, emotional stressors) and psychosocial stressors.

**Epidemiology:**

- 5 years: 7% boys, 3% girls
- 10 years: 3% boys, 2% girls
- Spontaneous resolution ~15%/year

**Etiology:** Multifactorial, maturational delay, reduced nocturnal bladder capacity, high arousal threshold, ADH deficiency, genetic factors

**Treatment:**

| MODALITY | EVIDENCE | NOTES |
|---|---|---|
| **Bell-and-pad (Urine alarm)** | Best long-term; 75–85% success | Conditioning treatment; requires 8–12 weeks; best relapse prevention |
| **Desmopressin (DDAVP)** | Rapid effect; relapse on stopping | ADH analogue; reduces urine output; available as intranasal or tablet; watch for hyponatremia |
| **Imipramine** | Second-line; 40–50% success | High relapse; cardiac side effects; toxic in overdose; falling out of favor |
| **Bladder training** | Mild benefit | Works best for diurnal enuresis |
| **Motivational therapy** | Combined with above | Reward systems, not punishment |

## 7.2 Encopresis

**DSM-5 Criteria:**

- Repeated passage of feces into inappropriate places (floor, clothing), involuntary or intentional

- At least once monthly for at least 3 months
- Chronological age ≥4 years
- Not due to substance or medical condition

**Types:**

- **With constipation and overflow incontinence:** Most common (>80%); liquid/semi-liquid stool leaks around impacted hard stool
- **Without constipation/overflow incontinence:** Less common; may be related to CD, anger, trauma

**Treatment:**

1. Disimpaction (enema/polyethylene glycol)
2. Maintenance stool softeners (polyethylene glycol/lactulose)
3. Behavioral: scheduled toilet sitting (15 min after meals, gastrocolic reflex), reward systems
4. High-fiber diet, fluid intake
5. CBT/family therapy if psychosocial factors dominant

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# PART 8: CHILD ABUSE AND NEGLECT

## 8.1 Types and Definitions

| TYPE | DEFINITION | CLINICAL INDICATORS |
|---|---|---|
| **Physical abuse** | Non-accidental physical injury | Bruises in unusual locations (torso, buttocks, ears), patterned bruises, burns (cigarette, immersion), fractures in unusual ages/locations |
| **Sexual abuse** | Sexual activity with child without consent/understanding | Genital/rectal injuries, STIs, sexualized behavior, regression |
| **Emotional/Psychological abuse** | Pattern of behavior damaging emotional development | Failure to thrive, severe behavioral problems, low self-esteem, depression |
| **Neglect** | Failure to provide basic needs | Poor hygiene, developmental delay, failure to thrive, unsupervised |
| **Medical neglect** | Failure to provide medical care | Untreated illness, missed vaccinations |

## 8.2 Physical Indicators

**Bruises suspicious for abuse:**

- Torso, ears, neck in pre-mobile infants
- Patterned bruises (belt buckle, cord, hand)
- Multiple bruises in various stages of healing
- TEN-4 FACES P mnemonic (see mnemonics file)

**Burns suspicious for abuse:**

- Cigarette burns: circular, punched-out appearance
- Immersion burns: sharply demarcated "stocking/glove" distribution
- Contact burns: exact shape of object

**Fractures suspicious for abuse:**

- In children <2 years (especially <1 year)
- Posterior rib fractures (bucket-handle metaphyseal fractures)
- Multiple fractures in different stages of healing
- Spiral fractures in non-ambulatory children
- Skull fractures (particularly bilateral, crossing sutures)

**Abusive Head Trauma (Shaken Baby Syndrome):**

- Subdural hematoma (especially bilateral interhemispheric)
- Diffuse axonal injury
- Retinal hemorrhages (highly specific)
- No external signs of injury necessarily
- Mechanism: acceleration-deceleration

> EXAM PEARL
> Retinal hemorrhages in a young infant with subdural hematoma and no clear accidental mechanism = abusive head trauma until proven otherwise. The combination is highly specific for non-accidental injury.

## 8.3 Munchausen by Proxy (Factitious Disorder Imposed on Another)

DSM-5 term: **Factitious Disorder Imposed on Another**

- Caregiver fabricates or induces symptoms in a child
- Motivation: to assume sick role vicariously, attention/sympathy
- Perpetrator: most commonly the mother (>90%)
- Child presents with recurrent, unexplained, treatment-refractory illness
- May involve inducing illness (poisoning, suffocation, adding blood to urine samples)
- Perpetrator appears devoted, knowledgeable, calm despite child's illness
- Illness resolves when child separated from perpetrator

Red flags:

- Symptoms only witnessed by caregiver
- Multiple unexplained symptoms, negative investigations
- Symptoms resolve with separation from caregiver
- Caregiver with medical knowledge and unusual calm

### 8.4 Child Sexual Abuse (CSA)

- Prevalence estimates: 1 in 4 girls, 1 in 13 boys (CDC)
- Most common perpetrator: known to child (family member or trusted adult, ~90%)
- Grooming: gradual normalization of sexual contact
- Physical examination: most CSA leaves no physical evidence (hymenal changes in <5%)
- Behavioral indicators: age-inappropriate sexual knowledge/behavior, regressive behavior, sleep disturbance, school problems, depression, PTSD symptoms

### 8.5 Forensic Interview

- Purpose: gather accurate information while minimizing trauma
- Must be conducted by trained professionals
- NICHD Protocol (National Institute of Child Health and Human Development), gold standard
- RATAC (CornerHouse Approach) / ChildFirst (Cornelsen)
- Principles: open-ended questions first, avoid leading questions, avoid multiple interviews
- Child interview before medical examination when possible

### 8.6 Mandatory Reporting

- In most jurisdictions: all healthcare professionals are mandatory reporters
- Reasonable suspicion (not certainty) is sufficient to report
- Responsibility is to report to child protection services, not to investigate
- Clinician-patient confidentiality does NOT prevent mandatory reporting of suspected child abuse

> **CLINICAL ANCHOR**
> In India, the Protection of Children from Sexual Offences (POCSO) Act 2012 mandates reporting of child sexual abuse. Failure to report is a criminal offense. Know this for the Indian context exam.

### 8.7 Long-term Consequences of Abuse

DOMAIN · LONG-TERM EFFECTS

**Psychiatric** PTSD, depression, anxiety, BPD, dissociative disorders, substance use disorders, eating disorders

**Neurobiological** HPA axis dysregulation, cortical thinning (prefrontal, temporal), hippocampal volume reduction, epigenetic changes

**Interpersonal** Attachment difficulties, revictimization risk, perpetration risk (intergenerational)

**Physical** Chronic pain, autoimmune disorders, cardiovascular disease, reduced life expectancy

**Cognitive** Learning difficulties, attention problems, reduced IQ

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# PART 9: GAMING DISORDER

## 9.1 ICD-11 Classification

**ICD-11 Code 6C51, Gaming Disorder**

**Criteria (all must be present for at least 12 months; shorter if severe):**

1. **Impaired control** over gaming (onset, frequency, intensity, duration, termination, context)
2. **Increasing priority** given to gaming to the extent that it takes precedence over other life interests and daily activities
3. **Continuation or escalation** of gaming despite occurrence of negative consequences

Gaming behavior must result in significant impairment in personal, family, social, educational, occupational, or other important areas of functioning.

> EXAM PEARL
> ICD-11 recognizes Gaming Disorder; DSM-5 lists "Internet Gaming Disorder" as a condition for further study (not official diagnosis). For exam purposes: ICD-11 has the official diagnosis.

## 9.2 Epidemiology

- Prevalence estimates: 1–10% (wide range due to definitional differences)
- More common in males, adolescents
- Asia-Pacific: higher rates (South Korea 10.2%, China 10%)
- Comorbidities: ADHD, social anxiety, depression, insomnia

## 9.3 Neurobiological Overlap

- Similar to substance use disorders: striatal dopamine, PFC-dependent inhibitory control

- Cue reactivity: gaming cues activate reward circuitry similarly to drug cues
- Reduced grey matter: prefrontal cortex, insula, inferior frontal gyrus

### 9.4 Management

**Assessment:** IGDS (Internet Gaming Disorder Scale), CAGE-adapted for gaming

**Treatment:**

- CBT: most evidence; cognitive restructuring, behavioral strategies, scheduling
- Motivational interviewing: for ambivalent users
- Family therapy: address enabling behaviors, improve communication
- Pharmacotherapy: no specific agent; treat comorbid ADHD/depression/anxiety
- Inpatient programs: "digital detox", structured settings; limited evidence

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## PART 10: SPECIFIC LEARNING DISORDERS

### 10.1 DSM-5 Classification

**DSM-5 Code 315, Specific Learning Disorder (SLD)**

Criteria:

- Difficulties learning and using academic skills for ≥6 months despite intervention
- Affected skills substantially below expectations for age
- Learning difficulties evident in school years (may not fully manifest until demands exceed capacities)
- Not accounted for by intellectual disability, sensory problems, inadequate instruction

**Specify:**

- With impairment in reading (dyslexia specifier)
- With impairment in written expression (dysgraphia specifier)
- With impairment in mathematics (dyscalculia specifier)

Severity: Mild, Moderate, Severe

### 10.2 Dyslexia

**Core deficit:** Phonological processing, difficulty mapping letters to sounds (grapheme-phoneme correspondence)

**Features:**

- Slow, effortful, inaccurate reading
- Difficulty with phonemic awareness (identifying/manipulating sounds in words)
- Spelling difficulties

- Family history strong
- IQ is typically average or above
- Secondary: reading avoidance, underachievement

**Prevalence:** 5–15% of school-age children; most common SLD

**Neurobiological:** Left hemisphere temporal-parietal-occipital dysfunction; reduced activation in reading networks (Shaywitz et al.)

**Treatment:** Systematic phonics instruction (Orton-Gillingham approach; Science of Reading movement), multisensory instruction, reading support

### 10.3 Dyscalculia

- Difficulty with number sense, arithmetic facts, calculation
- Spatial processing deficits contribute
- Prevalence: 3–7%
- Neurobiological: right parietal lobe (intraparietal sulcus) dysfunction
- Treatment: concrete manipulatives, visual representations, number line strategies

### 10.4 Dysgraphia (Impairment in Written Expression)

- Difficulty with handwriting mechanics AND/OR compositional aspects
- Motor dysgraphia: poor letter formation, letter size/spacing irregularities
- Language-based dysgraphia: correct letters but poorly organized written content
- Treatment: occupational therapy, keyboarding as alternative, graphic organizers

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## PART 11: ATTACHMENT DISORDERS

### 11.1 Background

Attachment theory (Bowlby): children develop internal working models of relationships based on early caregiver interactions. Secure base concept. Ainsworth Strange Situation identified attachment patterns.

**Attachment patterns:**

- Secure: uses caregiver as safe base; exploration + reunion
- Insecure-Avoidant: minimal distress; avoids caregiver on reunion
- Insecure-Ambivalent/Resistant: high distress; ambivalent on reunion
- Disorganized: no coherent strategy; associated with trauma/maltreatment (Main & Hesse)

### 11.2 Reactive Attachment Disorder (RAD)

**DSM-5 Criteria:**

- Consistent pattern of inhibited, emotionally withdrawn behavior toward adult caregivers (at least 2 of):
- Child rarely seeks comfort when distressed
- Child rarely responds to comfort when offered
- Persistent social/emotional disturbance (at least 2 of):
- Minimal social/emotional responsiveness
- Limited positive affect
- Episodes of irritability, sadness, or fearfulness during non-threatening interactions
- History of extremes of insufficient care (social neglect, limited caregiving opportunities, multiple changes in primary caregivers, rearing in unusual settings that limit opportunities)
- Not better explained by ASD
- Evident before age 5

> **EXAM PEARL**
> RAD requires a history of severe deprivation/neglect as a PREREQUISITE. It cannot be diagnosed without this context. Must distinguish from ASD.

### 11.3 Disinhibited Social Engagement Disorder (DSED)

**DSM-5 Criteria:**

- Pattern of behavior in which child actively approaches and interacts with unfamiliar adults, at least 2 of:
- Reduced or absent reticence with unfamiliar adults
- Overly familiar verbal or physical behavior
- Diminished or absent checking back with adult caregiver after venturing away
- Willingness to go off with unfamiliar adult
- Behavior not limited to impulsivity but includes disinhibited social engagement
- History of extremes of insufficient care
- May co-exist with ADHD (distinguish from ADHD impulsivity)

**Key Difference from RAD:**

| FEATURE | RAD | DSED |
|---|---|---|
| Core pattern | Inhibited, withdrawn | Disinhibited, indiscriminate social engagement |
| Caregiver relationship | Withdrawn from caregivers | Not attached but socially active with strangers |

| FEATURE | RAD | DSED |
|---|---|---|
| **Response to care** | Improves with stable caregiving | May persist even after stable caregiving |
| **ASD confusion** | Can be confused with ASD | Less confusion with ASD |
| **AD/ADHD comorbidity** | Less common | DSED + ADHD possible |

# PART 12: ADDITIONAL HIGH-YIELD TOPICS

## 12.1 Childhood Disintegrative Disorder (Now Under ASD)

- DSM-5 subsumed into ASD
- Previously: normal development until ≥2 years, then marked regression in ≥2 domains
- Prognosis: worse than autistic disorder without regression
- Rule out Rett syndrome, Landau-Kleffner syndrome, metabolic disorders

## 12.2 Pica

**DSM-5:** Persistent eating of non-nutritive, non-food substances for ≥1 month; developmentally inappropriate (≥2 years); not culturally sanctioned

- Common in ID and ASD
- Risk: lead poisoning, intestinal obstruction, infections (toxocariasis, toxoplasmosis)
- Iron deficiency anemia may cause and result from pica
- Treatment: nutritional supplementation if deficiency, behavioral strategies, address underlying ID/ASD

## 12.3 Rumination Disorder

- Repeated regurgitation of food for ≥1 month
- Not due to medical condition, anorexia, or bulimia
- May be self-stimulatory in ID
- Habit reversal training, diaphragmatic breathing

## 12.4 Avoidant/Restrictive Food Intake Disorder (ARFID)

- Extreme food restriction not driven by body image concerns
- Common in ASD (sensory avoidance of textures/smells), ADHD
- Can lead to nutritional deficiencies, failure to thrive

## 12.5 Developmental Coordination Disorder (DCD)

- Motor skills substantially below age expectations
- Clumsy, slow, inaccurate motor performance

- Not explained by ID, visual impairment, neurological condition
- Often co-occurs with ADHD, dyslexia
- Treatment: occupational therapy, motor skill training

## KEY PHARMACOLOGY SUMMARY

| DRUG | PRIMARY USE IN CHILD PSYCH | MECHANISM | KEY SIDE EFFECTS |
|---|---|---|---|
| **Methylphenidate** | ADHD | DAT/NET blocker | Anorexia, insomnia, growth suppression, tachycardia |
| **Amphetamine** | ADHD | DAT/NET blocker + releaser | Same + more appetite suppression |
| **Lisdexamfetamine** | ADHD, Binge Eating | Prodrug → d-AMP | Same as amphetamine; lower abuse liability |
| **Atomoxetine** | ADHD | Selective NET inhibitor | GI, activation, hepatotoxicity (rare), suicidality (BBW) |
| **Guanfacine ER** | ADHD, tics | $\alpha$2A agonist | Sedation, bradycardia, hypotension |
| **Clonidine ER** | ADHD, tics, sleep | $\alpha$2 agonist | Sedation, bradycardia, rebound hypertension |
| **Fluoxetine** | MDD (age 8+), OCD, anxiety | SSRI | GI, activation, suicidality (BBW), serotonin syndrome |
| **Sertraline** | Anxiety, OCD | SSRI | Similar to fluoxetine |
| **Escitalopram** | Depression (age 12+) | SSRI | Similar |
| **Risperidone** | ASD irritability, aggression | D2/5HT2A antagonist | EPS, weight gain, prolactin elevation, metabolic |
| **Aripiprazole** | ASD irritability, tics | Partial D2 agonist | Weight gain, akathisia, less metabolic than risperidone |
| **Haloperidol** | Tics | Potent D2 blocker | EPS, tardive dyskinesia, NMS |
| **Melatonin** | Sleep in ASD/ADHD | MT1/MT2 agonist | Generally safe; long-term studies limited |
| **Desmopressin** | Enuresis | V2 agonist (ADH analogue) | Hyponatremia (water restriction needed) |

| DRUG | PRIMARY USE IN CHILD PSYCH | MECHANISM | KEY SIDE EFFECTS |
|---|---|---|---|
| **Imipramine** | Enuresis | TCA | Cardiac arrhythmia, anticholinergic, toxic in overdose |

KEY INSIGHT

**EXAM PEARL, ONLY FDA-APPROVED:** - Methylphenidate/amphetamine: ADHD (age 6+) - Atomoxetine: ADHD (age 6+) - Fluoxetine: MDD (age 8+), OCD (age 7+) - Sertraline: OCD (age 6+) - Fluvoxamine: OCD (age 8+) - Risperidone: Irritability in ASD (age 5+), schizophrenia (age 13+), bipolar (age 10+) - Aripiprazole: Irritability in ASD (age 6+), schizophrenia (age 13+), bipolar (age 10+) - Clomipramine: OCD (age 10+) - Escitalopram: MDD (age 12+) - Dextroamphetamine: ADHD (age 3+)

| *SOURCES: KAPLAN & SADOCK'S COMPREHENSIVE TEXTBOOK OF PSYCHIATRY (11TH ED.) | RUTTER'S CHILD AND ADOLESCENT PSYCHIATRY (6TH ED.) | LEWIS'S CHILD AND ADOLESCENT PSYCHIATRY (5TH ED.) | DSM-5-TR | ICD-11* |
|---|---|---|---|---|

# Model Answers

**Sources:** Kaplan & Sadock (11th ed.), Rutter's Child and Adolescent Psychiatry (6th ed.), Lewis's Child and Adolescent Psychiatry (5th ed.), DSM-5-TR, ICD-11

## Q1. Discuss the assessment and management of a 9-year-old boy presenting with poor attention, hyperactivity, and academic difficulties. (20 marks)

### Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is the most common neurodevelopmental disorder of childhood, with a prevalence of 5–7% in school-age children. The clinical presentation of inattention, hyperactivity, and impulsivity resulting in academic and functional impairment warrants a comprehensive biopsychosocial assessment.

### Assessment

**History:**

A thorough history from multiple informants is essential:

*From parents:*

- Detailed developmental history: prenatal exposures (alcohol, tobacco, infections), birth complications, perinatal events, developmental milestones (language, motor, social)
- Onset, duration, and severity of current symptoms
- Description of behaviors across settings (home, family gatherings, structured vs. unstructured play)
- Academic history: school reports, teacher feedback, grade retention
- Family history: ADHD, learning disabilities, mood disorders, substance use
- Medical history: thyroid dysfunction, seizure disorders, hearing/vision problems, lead exposure, iron deficiency
- Sleep history (insomnia, snoring suggesting OSA, can mimic ADHD)
- Medication history

*From teachers (ideally via standardized rating scales):*

- Classroom behavior
- Academic performance

- Peer relationships
- Response to current management strategies

**Mental Status Examination:**

- Motor behavior: activity level, coordination, tics
- Attention: sustained attention, distractibility
- Speech/language: fluency, receptive/expressive language
- Mood and affect: irritability, anxiety
- Cognitive: estimate of intelligence

**Investigations:**

- Standardized rating scales: Conners-3 (parent + teacher), SNAP-IV, Vanderbilt
- Psychological/neuropsychological testing: WISC-V (full cognitive profile), BRIEF (executive function), reading assessment if learning disability suspected
- Medical workup: thyroid function (if clinical indication), lead levels (if exposure history), vision and hearing screen, ECG if considering stimulant with cardiac concern

**Differential Diagnosis:**

| CONDITION · DISTINGUISHING FEATURES |
| --- |
| **Anxiety disorder** Inattention due to worry, not DHTN; situational (more prominent in anxiety-provoking situations) |
| **Learning disorder** Academic problems without hyperactivity; specific domain deficits |
| **Conduct Disorder** Intentional rule-breaking; may coexist |
| **Depression** Cognitive slowing, anhedonia, mood change |
| **ASD** Social communication deficits, RRBIs; can be comorbid |
| **Absence epilepsy** Brief staring spells with EEG confirmation |
| **Sensory impairment** Hearing/vision loss causing inattentive behavior |

**Diagnostic Criteria (DSM-5):**

Diagnosis requires: (1) ≥6 inattentive symptoms AND/OR ≥6 hyperactive-impulsive symptoms for ≥6 months; (2) several symptoms present before age 12; (3) impairment in ≥2 settings; (4) not explained by other mental disorder.

## Management

**Multimodal Treatment Plan:**

**1. Psychoeducation:**

- Explain ADHD as a neurodevelopmental disorder, not laziness or poor parenting
- Brain-based explanation (PFC dopamine/NE dysregulation)
- Information about treatment options, prognosis, realistic expectations
- Parent support groups, CHADD (Children and Adults with ADHD) resources

**2. Behavioral Interventions (first-line for age 4–5; adjunct for school-age):**

*Behavioral Parent Training (BPT):*

- Triple P, Incredible Years, Parent-Child Interaction Therapy (PCIT)
- Skills: positive attention, reward systems, clear instructions, consistent consequences, planned ignoring

*School-based interventions:*

- Daily Report Card (DRC): home-school communication
- Preferential seating (front, away from distractors)
- Extended time on tests, reduced homework load
- Frequent brief breaks, movement opportunities
- Simplified instructions, visual cues

**3. Pharmacotherapy:**

First-line: **Methylphenidate (MPH)**

| FORMULATION | DOSE | NOTES |
|---|---|---|
| **IR MPH (Ritalin)** | 5mg BD-TID; max 60mg/day | Fast onset 30–60 min; rebound effect |
| **LA MPH (Concerta)** | 18mg OD; titrate by 18mg; max 54mg | Once-daily dosing; better adherence |

*Titration:* Start low (0.3 mg/kg/day), increase weekly by 0.1 mg/kg increments, target 0.5–1.0 mg/kg/day based on response and tolerability.

*Monitoring:* Height/weight (monthly initially), BP/HR, appetite, sleep, mood, tic observation

*Side effect management:*

- Appetite suppression: give medication AFTER breakfast; high-calorie dinner
- Insomnia: take medication earlier; avoid afternoon doses
- Growth: measure height biannually; drug holidays if significant suppression

If stimulants fail or contraindicated: Atomoxetine (selective NRI), 1.2 mg/kg/day target, takes 4–6 weeks for full effect.

**4. Academic and Educational Planning:**

- Formal IEP (Individualized Education Plan) if in formal school system
- Remedial teaching for specific academic deficits
- Occupational therapy for fine motor/writing difficulties
- Social skills training if interpersonal difficulties prominent

**5. Monitoring and Follow-Up:**

- Monthly for first 3 months: response, side effects, dose adjustment
- 3-monthly thereafter: academic performance, weight/height, blood pressure
- Annual: reassess diagnosis, medication need, consider drug holiday

> **EXAM PEARL**
> The MTA study showed medication superior to behavioral therapy alone for core ADHD symptoms in children ≥6 years. Combined treatment is best for anxiety comorbidity. Medication is not effective in isolation, psychoeducation and school supports are always needed.

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## Q2. Describe the clinical features of Autism Spectrum Disorder (ASD) and outline a comprehensive assessment pathway. (15 marks)

### Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by persistent deficits in social communication and social interaction, alongside restricted, repetitive behaviors, interests, and activities (RRBIs). It is classified under ICD-11 as 6A02 and follows DSM-5 criteria for diagnosis.

### Clinical Features

**Domain 1, Social Communication and Interaction Deficits (all three present):**

1. *Social-emotional reciprocity:*
2. Reduced sharing of interests, emotions
3. Atypical social approach
4. Failure to initiate or respond to social interactions
5. Abnormal back-and-forth conversation

1. *Nonverbal communicative behaviors:*
2. Reduced eye contact
3. Limited facial expressions
4. Absent or atypical gesture use
5. Poor integration of verbal/nonverbal communication

1. *Relationship development:*
2. Difficulty adjusting behavior to social context
3. Difficulty making and maintaining friendships
4. Absent interest in peers (not social anxiety, indifference)

**Domain 2, Restricted, Repetitive Behaviors and Interests (≥2 present):**

1. *Stereotyped/repetitive behaviors:*
2. Hand-flapping, rocking, spinning
3. Lining up objects
4. Echolalia (immediate or delayed)

1. *Insistence on sameness:*
2. Rigid routines
3. Extreme distress at minor changes
4. Ritualized patterns of behavior

1. *Fixated interests:*
2. Intense, narrow preoccupations
3. Atypical in focus or intensity (e.g., specific bus routes, vacuum cleaners)

1. *Sensory abnormalities:*
2. Hyperreactivity (distress to textures, sounds)
3. Hyporeactivity (indifference to pain, temperature)
4. Sensory-seeking behaviors (sniffing, spinning, mouthing)

**Early red flags (12 months):** No babbling, no gestures, no response to name

**Early red flags (18 months):** No words, no pretend play, no joint attention

**Early red flags (24 months):** No spontaneous two-word phrases; any regression

## Severity Levels (DSM-5)

| LEVEL | SUPPORT NEEDED | SOCIAL COMMUNICATION | RRBIS |
|---|---|---|---|
| 1 | Support | Noticeable deficits with minimal support; difficulty initiating | Inflexibility significantly interferes; difficulty switching |
| 2 | Substantial support | Marked deficits; limited initiation; atypical responses | Markedly obvious; distress when interrupted |
| 3 | Very substantial support | Severe deficits; minimal response | Extreme difficulty changing; intense distress |

## Assessment Pathway

**Step 1, Developmental Surveillance and Screening:**

- Routine developmental checks at 9, 18, 24, 36 months
- M-CHAT-R/F at 16–30 months (sensitivity 91% after follow-up)
- Any regression in language or social skills warrants immediate referral

**Step 2, Comprehensive Developmental Pediatric/Child Psychiatry Assessment:**

*History:*

- Detailed developmental history (prenatal, perinatal, milestones)
- Regression history (when, how much, over what timeframe)
- Current social, language, behavioral functioning
- Family history (ASD, ADHD, ID, language delay)
- Medical history (seizures, GI symptoms, sleep)

*Physical examination:*

- Dysmorphic features (genetic syndrome screening)
- Skin: ash-leaf spots (TS), café-au-lait spots (NF1)
- Neurological examination
- Growth parameters

**Step 3, Standardized Diagnostic Assessment:**

| INSTRUMENT | TYPE | PURPOSE |
|---|---|---|
| ADOS-2 | Structured observation | Direct assessment of social communication/play/behavior; Module selected by language level |
| ADI-R | Structured parent interview | Developmental history across three domains; algorithms for diagnosis |
| Vineland-3 | Parent interview/questionnaire | Adaptive behavior (communication, daily living, socialization) |

**Step 4, Cognitive and Language Assessment:**

- WISC-V (6–16 years) or Leiter-3 (non-verbal IQ)
- WPPSI-IV (2.5–7 years)
- CELF-5 or PLS (language)
- Determine verbal IQ/non-verbal IQ discrepancy (common in ASD)

**Step 5, Allied Health Assessment:**

- Occupational therapy: sensory profile, fine/gross motor, daily living skills
- Speech and language therapy: pragmatic language, AAC needs
- Educational psychology: learning profile

**Step 6, Medical Investigations:**

| INVESTIGATION · INDICATION | |
|---|---|
| **Chromosomal microarray** | All ASD cases (10–15% yield for clinically significant variants) |
| **Fragile X testing (FMR1)** | Especially males with ID + ASD features |
| **EEG** | If clinical seizure concern (regression, paroxysmal events) |
| **Brain MRI** | If focal neurological signs or seizures |
| **Metabolic screen** | If regression, developmental plateau, dysmorphic features |
| **Hearing test** | Always, as part of speech/language evaluation |

**Step 7, Feedback and Formulation:**

- Clear diagnosis and severity level
- Comorbidity mapping (ID, ADHD, epilepsy, anxiety)
- Strengths-based profile
- Management recommendations

> EXAM STRATEGY
>
> The assessment pathway follows a tiered sequence: screen → observe → diagnose (ADOS-2 + ADI-R) → profile (cognitive/language/adaptive) → investigate medically. Do not jump directly to investigations. The gold standard diagnosis requires ADOS-2 AND ADI-R together.

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## Q3. Classify intellectual disability and describe the evaluation of a child with suspected intellectual disability. (15 marks)

### Classification

**DSM-5 Classification:**

Intellectual Disability (ID) is defined by three criteria:

1. Deficits in intellectual functions (confirmed by standardized testing AND clinical assessment)
2. Deficits in adaptive functioning (conceptual, social, or practical domains)

3. Onset during developmental period

**Severity is determined by ADAPTIVE FUNCTIONING, not IQ alone (DSM-5 change from DSM-IV):**

| SEVERITY | CONCEPTUAL DOMAIN | SOCIAL DOMAIN | PRACTICAL DOMAIN |
|---|---|---|---|
| **Mild (IQ ~50–69)** | Academic skills below peers; abstract thinking, executive function limited | Immature social interactions; gullible, naive | Can be independent in self-care; needs support for complex tasks |
| **Moderate (IQ ~35–49)** | Academic skills limited (few-word reading, simple arithmetic) | Significant difference in social/communicative behavior; uses simple language | Can care for personal needs with training; supervision needed for complex decisions |
| **Severe (IQ ~20–34)** | Limited conceptual skill acquisition; understands some simple language | Single words, simple phrases; relationships with family/familiar others | Requires support for most ADLs; some can do simple ADLs |
| **Profound (IQ <20)** | Primarily concrete understanding; relies on physical/sensory interaction | Relies on nonverbal communication; close relationship with caregivers | Dependent on others for all aspects of care; may achieve some self-help with extensive training |

## Evaluation

**1. Presenting Complaint and Chief Concerns:**

- Developmental delay (delayed milestones)
- Learning difficulties at school
- Behavioral problems
- Communication difficulties

**2. Detailed History:**

*Prenatal:* Maternal illness (rubella, CMV, toxoplasmosis), substance use (alcohol, FASD), medications (anticonvulsants), thyroid disease, radiation, consanguinity (autosomal recessive conditions), antenatal scan anomalies

*Perinatal:* Gestational age, birth weight, birth asphyxia, neonatal seizures, hypoglycemia, jaundice requiring exchange transfusion, NICU admission

*Postnatal:* Meningitis, encephalitis, traumatic brain injury, seizures, nutritional deficiencies, lead exposure, severe deprivation/neglect

*Developmental milestones:* Motor (head control, sitting, walking), Language (first words, two-word phrases), Social (social smile, stranger anxiety), Self-care skills

*Educational history:* Entry to school, grade placement, teacher reports, support needed

*Family history:* ID in family members, consanguinity, genetic conditions, learning disabilities

*Behavioral history:* Self-injurious behavior, aggression, sleep problems, stereotypies, anxiety

**3. Physical Examination:**

*General:* Growth parameters (height, weight, head circumference, micro/macrocephaly)

*Dysmorphic features:*

- Down syndrome: flat facies, upslanting palpebral fissures, epicanthal folds, Brushfield spots, small ears, single palmar crease, hypotonia
- Fragile X: long face, prominent ears, macro-orchidism (post-pubertal)
- Williams syndrome: elfin facies, broad forehead, periorbital fullness
- Angelman: wide mouth, widely-spaced teeth, happy affect

*Skin:* Ash-leaf macules (tuberous sclerosis), café-au-lait spots (NF1), port-wine stain (Sturge-Weber)

*Neurological:* Tone, reflexes, coordination, cerebellar signs, cranial nerves

**4. Psychological Assessment:**

*Intelligence Testing:*

| TEST | AGE RANGE | NOTES |
|---|---|---|
| **WPPSI-IV** | 2.5–7 years | Verbal + Performance IQ; good for preschool |
| **WISC-V** | 6–16 years | Five factor model; most widely used |
| **Stanford-Binet 5** | 2–85 years | Full range; good floor for low IQ |
| **Leiter-3** | 3–75 years | Non-verbal; use for non-English speakers, ASD, hearing impaired |

*Adaptive Behavior Assessment:*

- Vineland Adaptive Behavior Scales-3 (VABS-3): gold standard; semi-structured interview; communication, daily living skills, socialization, motor skills
- ABAS-3 (Adaptive Behavior Assessment System)

**5. Speech and Language Assessment:**

- Receptive and expressive language levels
- Augmentative and Alternative Communication (AAC) needs
- Pre-verbal communication (joint attention, gesture, gaze)

**6. Medical Investigations:**

| INVESTIGATION · RATIONALE | |
|---|---|
| **Karyotype / Chromosomal microarray** | Chromosomal abnormalities; microarray has higher yield (15–20%) |
| **FISH for specific syndromes** | If clinical features suggest specific deletion/duplication (e.g., 22q11, Williams) |
| **Fragile X (FMR1 PCR)** | Males with ID, especially with ASD features |
| **Metabolic screen** | Inborn errors of metabolism (PKU, homocystinuria, lysosomal storage) |
| **Thyroid function** | Hypothyroidism as cause |
| **Lead levels** | If environmental exposure |
| **EEG** | Seizure disorder (comorbid in 25%) |
| **Brain MRI** | Structural anomalies, white matter disease |
| **Hearing assessment** | Conductive/sensorineural hearing loss |
| **Ophthalmology** | Refractive error, cataracts |

**7. Formulation and Management Planning:**

- Etiology (where determinable)
- Severity across domains
- Comorbid psychiatric, medical, behavioral conditions
- Strengths and capacities
- Management: early intervention, special education, speech therapy, occupational therapy, behavioral support, family support, caregiver training

> **CLINICAL ANCHOR**
> Chromosomal microarray (CMA) is now the first-tier genetic investigation for unexplained ID/ASD, it detects submicroscopic copy number variants that karyotype misses, with a 15–20% diagnostic yield. Karyotype is preferred only if Down syndrome or structural chromosomal abnormality is suspected clinically.

# Q4. Discuss the management of Conduct Disorder in an adolescent. (10 marks)

## Introduction

Conduct Disorder (CD) is characterized by a persistent pattern of behavior violating the rights of others and societal norms. It is associated with significant long-term morbidity (adult antisocial personality disorder in 25–40%) and requires a comprehensive, multi-systems approach.

## Assessment Before Management

A full assessment establishes:

- CD subtype (childhood vs. adolescent onset, prognosis differs)
- Presence of callous-unemotional (CU) traits (Limited Prosocial Emotions specifier)
- Comorbidities: ADHD (50%), substance use, depression, anxiety, learning disabilities
- Risk factors: family dysfunction, peer influences, neighborhood violence, academic failure
- Protective factors: academic strengths, prosocial relationships, family support

## Management Plan

**1. Psychoeducation:**

- Explain CD as a behaviorally complex disorder with biological and environmental contributors
- Normalize family distress; reduce blame-focused framing
- Discuss realistic treatment expectations (slow progress, setbacks expected)

**2. Behavioral Interventions:**

*Parent Management Training (PMT):*

- Most evidence for younger adolescents and parents willing to engage
- Patterson Oregon Social Learning Model
- Incredible Years (Webster-Stratton)
- Skills: consistent discipline, positive reinforcement, monitoring, problem-solving

*Multisystemic Therapy (MST):*

- Gold standard for serious antisocial behavior in adolescents
- Community-based, 3–5 months, intensive
- Addresses all systems: family, peers, school, neighborhood
- Evidence: superior to individual therapy and residential treatment
- Particularly effective for youth at risk of out-of-home placement

*Functional Family Therapy (FFT):*

- 12–30 sessions
- Focuses on family communication, problem-solving, attribution
- Good for moderate-severity CD

*Problem-Solving Skills Training (PSST):*

- Addresses cognitive distortions in social problem-solving
- Reduces hostile attribution bias

*Therapeutic foster care / residential treatment:*

- For high-risk youth failing community treatment
- Evidence-based residential models exist (Oregon TFC)

**3. School-based Interventions:**

- Educational support for learning disabilities
- Anti-bullying programs
- Social skills training
- Mentorship programs

**4. Pharmacotherapy (adjunctive):**

No medication treats CD specifically. Treat comorbidities:

| TARGET | MEDICATION | EVIDENCE |
|---|---|---|
| **Comorbid ADHD** | Methylphenidate, Amphetamine, Atomoxetine | Strong, reduces aggression significantly |
| **Severe impulsive aggression** | Lithium | RCT evidence (Malone et al.) |
| **Severe aggression** | Risperidone, Aripiprazole | Moderate evidence |
| **Mood instability** | Valproate | Some evidence |
| **Comorbid depression/anxiety** | SSRIs | Treat the comorbidity |

**5. Addressing CU Traits:**

Standard PMT is LESS effective in CD with CU traits. Modifications needed:

- Reward-based (not punishment-based) approaches more effective
- Parenting Intervention for Children with Conduct Problems and CU Traits (PRICC)
- Increasing empathic concern: emotion recognition training, perspective-taking
- Address reward hypersensitivity

**6. Diversion Programs:**

- Court-involved youth: diversion from criminal justice preferable

- Youth justice rehabilitation programs
- Mentoring, vocational training

**7. Long-term Follow-up:**

- Monitor for substance use, mood disorder, antisocial trajectory
- Educational and vocational support
- Family support services

> **EXAM STRATEGY**
> MST is the gold standard answer for moderate-to-severe CD in adolescents. Name it. Explain its multi-systems approach. For pharmacotherapy: treat ADHD first, reduction in impulsivity often significantly reduces aggressive behavior. Risperidone for residual severe aggression.

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## Q5. Describe the assessment and management of a child presenting with suspected sexual abuse. (15 marks)

### Introduction

Child sexual abuse (CSA) is defined as any sexual activity with a child without the child's consent or understanding, exploiting the child's developmental immaturity. Prevalence estimates suggest 1 in 4 girls and 1 in 13 boys experience CSA before age 18. Comprehensive assessment requires a trauma-informed, multidisciplinary approach.

### Indicators Suggesting Sexual Abuse

**Behavioral/psychological:**

- Age-inappropriate sexual knowledge, language, or behavior
- Sexual acting-out with peers or younger children
- Regression (enuresis, thumb-sucking)
- Sleep disturbance, nightmares
- Sudden school refusal, academic decline
- Depression, anxiety, PTSD symptoms
- Self-harm, suicidal ideation

**Physical:**

- Genital/rectal injuries inconsistent with history
- STIs in prepubertal children (gonorrhea, syphilis, HIV)
- Pregnancy in adolescent with unexplained circumstances
- Note: most CSA leaves NO physical evidence

## Assessment

**1. Disclosure:**

- Most CSA is disclosed verbally, not detected medically
- Accidental disclosure: child tells peer/teacher
- Purposeful disclosure: child tells trusted adult
- Behaviors that prompt investigation

**2. Forensic Interview:**

- Conducted by trained professional (child protection investigator, forensic interviewer)
- NICHD Protocol (Orbach et al.), gold standard
- Principles:
- Free-narrative approach first ("tell me everything about...")
- Open-ended questions before specific questions
- Never leading questions ("did he touch you there?")
- Establish rapport; explain rules (don't know = say "I don't know"; can correct interviewer)
- Single interview preferred (multiple interviews = contamination)
- Video-record when possible
- Child interview BEFORE physical examination

**3. Medical Assessment:**

*Conducted by trained pediatrician/forensic physician:*

- Detailed history of events (when, where, what type of contact, any bleeding/pain)
- Physical examination:
- General examination (look for other injuries, bruises, bites)
- Anogenital examination under adequate lighting, appropriate positioning
- Colposcopy (magnified examination, photodocumentation)
- Evidence collection: swabs, clothing, bedding (ideally within 72–96 hours of acute assault)
- STI testing: gonorrhea, chlamydia, syphilis, HIV baseline
- Emergency contraception if appropriate and within 72 hours

**4. Psychological Assessment:**

- PTSD evaluation: Child PTSD Symptom Scale (CPSS), UCLA PTSD-RI
- Depression: CDI (Children's Depression Inventory)
- Anxiety: RCADS (Revised Children's Anxiety and Depression Scale)
- Trauma Symptom Checklist for Children (TSCC)

- Dissociation assessment if indicated

**5. Risk Assessment:**

- Ongoing abuse risk
- Relationship of alleged perpetrator to child (intra-familial/extra-familial)
- Protective adult in household
- Child safety plan

## Mandatory Reporting

In India: POCSO Act 2012, ALL persons are mandated to report. Section 19: any person with knowledge of offense MUST report to SJPU (Special Juvenile Police Unit) or local police. Section 21: failure to report is an offense punishable with up to 6 months imprisonment.

## Management

**1. Safety:**

- Immediate: ensure child is safe; remove from contact with perpetrator
- Intra-familial abuse: may require removal of perpetrator or child to safe placement
- Non-offending parent/caregiver support is critical

**2. Trauma-Focused Cognitive Behavioral Therapy (TF-CBT):**

- Gold standard treatment for CSA-related PTSD and trauma symptoms
- 12–25 sessions
- Components (PRACTICE acronym):
- Psychoeducation about trauma reactions
- Relaxation skills
- Affective modulation
- Cognitive coping
- Trauma narrative processing and cognitive processing
- In vivo mastery of trauma reminders
- Conjoint child-parent sessions
- Enhancing safety and future development
- Both child AND caregiver involved in treatment
- Evidence: strong RCT base (Cohen, Mannarino)

**3. Pharmacotherapy:**

- Treat comorbid PTSD: SSRIs (sertraline, fluoxetine) for severe symptoms
- Sleep: melatonin, low-dose clonidine for nightmares

- Comorbid depression/anxiety: SSRIs

**4. Psychoeducation for Caregivers:**

- Normalize child's reactions
- Explain why children delay disclosure (shame, grooming, fear)
- Address caregiver's own trauma response (if non-offending caregiver is also distressed)

**5. Legal and Social Coordination:**

- Liaison with child protection services
- Court proceedings support (child-friendly court procedures under POCSO)
- School support and confidentiality planning

> **CLINICAL ANCHOR**
> The most common mistake is conducting a medical examination before a forensic interview. The forensic interview should always come first to minimize contamination of the child's account. Also: absence of physical findings does NOT rule out sexual abuse, most cases have no physical evidence.

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## Q6. Discuss school refusal: definition, classification, assessment, and management. (10 marks)

### Definition

School refusal refers to difficulty attending school due to emotional distress, resulting in prolonged absence. It is NOT a DSM-5 diagnosis but a clinically important presentation with multiple underlying causes. Distinguished from truancy (antisocial, no distress, parents unaware).

### Classification (Kearney & Silverman Functional Model)

| FUNCTION | MECHANISM | PRESENTATION |
|---|---|---|
| **1, Avoidance of negative affect** | Escape from school-related anxiety-provoking stimuli | Somatic symptoms on school mornings; relief on staying home |
| **2, Escape from social/evaluative** | Social anxiety, performance anxiety, fear of evaluation | Avoids tests, presentations, PE, social situations at school |
| **3, Attention-seeking** | Separation anxiety; maintain proximity to caregiver | Distress focused on being away from parent; clings |
| **4, Tangible reinforcement** | More reinforcing activities at home (gaming, TV) | Prefers home; no clear anxiety; may be combined with CD |

## Assessment

**History:**

- Duration of absence (acute vs. prolonged)
- Precipitating events (school change, bullying, family stress, illness)
- Pattern of refusal (which days, which subjects)
- Somatic complaints (headache, stomachache, timing relative to school)
- Caregiver response (accommodation patterns)
- Academic history, peer relationships
- Bullying (direct and cyberbullying)
- Previous psychiatric history

**Mental Status and Rating Scales:**

- Anxiety: RCADS, SCARED (Screen for Child Anxiety Related Disorders)
- Depression: CDI
- School Refusal Assessment Scale-Revised (SRAS-R), assesses function

**Investigations:**

- Medical evaluation to rule out organic cause for somatic complaints (GI workup if chronic abdominal pain, etc.)
- Educational assessment if learning disability suspected

## Management

**Core principle: Rapid return to school is the primary goal.** Every additional day of absence entrenches avoidance.

**1. School Liaison:**

- Meet with school to arrange graduated return plan
- Identify triggers at school (specific class, teacher, peer)
- Arrange adjustments: modified timetable, quiet room, trusted adult
- Partial day attendance initially, building up

**2. Cognitive Behavioral Therapy:**

- Graded exposure hierarchy (from least to most anxiety-provoking)
- Cognitive restructuring (catastrophic thinking about school)
- Relaxation skills (diaphragmatic breathing, progressive muscle relaxation)
- Social skills training if social anxiety prominent
- EMDR if bullying/trauma involved

**3. Family Interventions:**

- Address parental accommodation (staying home with child, allowing avoidance)
- Parent coaching on managing morning routines
- Reduce secondary reinforcement of staying home

**4. Pharmacotherapy:**

- SSRIs (sertraline, fluoxetine) for anxiety/depression driving refusal
- Start low, titrate slowly, allow 4–6 weeks for effect
- Short-term anxiolytic use controversial; habit-forming risk

**5. Inpatient/Intensive Outpatient:**

- For prolonged, severe, treatment-refractory cases
- Day hospital programs with school component

> EXAM PEARL
> Distinguish school refusal from truancy. Key features of school refusal: (1) child remains at home with parent's knowledge; (2) child is distressed; (3) somatic symptoms common on school mornings; (4) no other significant antisocial behavior. Truancy: child leaves home but does not go to school; no distress; parents often unaware.

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## Q7. Discuss the pharmacotherapy of pediatric depression with reference to safety and evidence. (10 marks)

### Introduction

Pediatric depression (Major Depressive Disorder in children and adolescents) requires careful pharmacological decision-making due to developmental considerations, the SSRIs' black box warning, and the landmark TADS trial findings.

### When to Use Pharmacotherapy

**Indications:**

- Moderate-severe depression unresponsive to psychotherapy alone
- Psychotic depression
- Severe functional impairment
- High suicidality requiring faster response
- First-line combination treatment (psychotherapy + SSRI) recommended

## FDA-Approved Antidepressants for Pediatric Depression

| DRUG | APPROVED AGE | STARTING DOSE | TARGET DOSE | NOTES |
|---|---|---|---|---|
| **Fluoxetine** | ≥8 years | 10mg/day | 20–60mg/day | Longest evidence base; active metabolite (long half-life = safety in overdose but slower wash-out) |
| **Escitalopram** | ≥12 years | 10mg/day | 10–20mg/day | Well tolerated; FDA-approved for adolescent depression |

**Commonly used off-label:**

- Sertraline (strong evidence from TORDIA, TADS secondary analyses)
- Citalopram (available evidence)

## TADS Trial (Treatment for Adolescents with Depression Study)

- N=439, ages 12–17, moderate-severe MDD
- Arms: Fluoxetine, CBT, Combination, Placebo
- Results:
- Combination (fluoxetine + CBT): 71% response, BEST
- Fluoxetine alone: 61% response
- CBT alone: 43% response
- Placebo: 35% response
- Suicidal ideation: higher in fluoxetine-only group vs. CBT, combination protected against this
- **Conclusion: Combination treatment is recommended; CBT acts as protective buffer against suicidal ideation associated with SSRIs**

## The Black Box Warning

- Added by FDA in 2004 following pooled meta-analysis
- All antidepressants: increased risk of suicidal IDEATION (not completed suicide) in children and adolescents
- Risk: ~4% vs. 2% placebo (absolute increase ~2%)
- Completed suicide rate: NOT increased; may be decreased with treatment
- Consequence: FDA warning → prescriber reluctance → untreated depression → increased deaths
- Monitoring protocol: weekly visits weeks 1–4; biweekly weeks 5–12; monthly thereafter

### Prescribing Guidelines

**Start low, go slow:**

- Children (8–12 years): Start fluoxetine 5–10mg/day; target 20mg/day; max 60mg/day
- Adolescents (13–18): Start 10mg/day; target 20–40mg/day

**Duration:**

- Continue 6–12 months after remission to prevent relapse
- Two or more episodes: consider maintenance for 1–2 years

**Non-response:**

- TORDIA trial: switching to another SSRI or venlafaxine equally effective; adding CBT to switch = better outcome
- Augmentation: add psychotherapy before adding second medication
- Atypical: consider mirtazapine (sleep, appetite, anxiety comorbidity)

> EXAM STRATEGY
> TADS and the black box warning are both testable. Know the TADS finding cold: 71% combination, 61% fluoxetine, 43% CBT, 35% placebo. For black box: suicidal IDEATION (not completed suicide) increased ~2%. Combination protects. Treatment reduces overall suicide risk.

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## Q8. Discuss the assessment and treatment of Tourette Syndrome. (10 marks)

### Introduction

Tourette Syndrome (TS) is a neurodevelopmental disorder characterized by multiple motor tics and at least one vocal tic, not necessarily concurrent, persisting for more than 12 months, with onset before age 18. It is not rare (0.3–1% children) and is frequently comorbid with ADHD (50–60%) and OCD (30–50%).

### Assessment

**History:**

- Onset and progression of tics (type, frequency, severity, impact)
- Premonitory urge (sensation preceding tic, relieved by performing it)
- Ability to suppress tics (and resultant tension/rebound)
- Waxing/waning course (worse with stress, excitement, fatigue)
- Coprolalia/echolalia/palilalia (ask specifically; often not volunteered)

- Comorbidities: ADHD symptoms, OCD/compulsive behaviors, anxiety, depression, learning difficulties
- Family history (TS highly heritable)
- Psychosocial impact: teasing, embarrassment, school problems, social isolation

**Examination:**

- Motor tics: simple (blinking, nose twitching, head jerking) vs. complex (touching, hopping, echopraxia, copropraxia)
- Vocal tics: simple (throat clearing, sniffing, grunting) vs. complex (echolalia, palilalia, coprolalia)
- Rule out PANDAS (Pediatric Autoimmune Neuropsychiatric Disorders Associated with Streptococcal infections): sudden onset, episodic course, associated with group A strep infection

**Rating Scales:**

- Yale Global Tic Severity Scale (YGTSS): motor + vocal subscales, impairment rating; gold standard
- PUTS (Premonitory Urge for Tics Scale)

**Investigations:**

- No specific investigation required for TS
- Throat culture/ASOT if PANDAS suspected
- Brain MRI only if atypical features (focal neurological signs, progressive worsening)
- Neuropsychological testing if academic problems/ADHD

## Treatment

**Decision to treat:** Not all tics require pharmacotherapy. Treat if: significant distress, social impairment, interference with function, severe tics causing pain/injury.

**Step 1, Education and Watchful Waiting:**

- Explain TS, prognosis (many improve by late adolescence)
- Psychoeducation for school (teacher awareness, anti-bullying)
- Address shame and embarrassment

**Step 2, Behavioral Treatment (CBIT):**

Comprehensive Behavioral Intervention for Tics, first-line for mild-moderate tics:

- Habit Reversal Training (HRT): awareness training → competing response training
- Functional intervention: identify triggers, modify antecedents
- Relaxation training
- Evidence: RCT (Wilhelm et al., 2012) superior to supportive therapy

- Advantage: no medication side effects; teaches lifelong self-management

**Step 3, Pharmacotherapy (moderate-severe tics or CBIT failed):**

| MEDICATION | STARTING DOSE | COMMENTS |
|---|---|---|
| **Aripiprazole** | 2mg/day, titrate to 5–20mg | Currently preferred atypical antipsychotic; better tolerability; RCT evidence |
| **Guanfacine ER** | 1mg at night | Non-antipsychotic option; useful with comorbid ADHD |
| **Clonidine** | 0.05mg BD | Older; more sedating; useful for ADHD comorbidity |
| **Risperidone** | 0.25–0.5mg/day, titrate | Effective; weight gain, prolactin |
| **Haloperidol** | 0.25–0.5mg/day | Most evidence historically; EPS, tardive dyskinesia, last resort |
| **Pimozide** | 1–2mg/day | QTc monitoring required |
| **Fluphenazine** | 0.5–1mg/day | Alternative typical antipsychotic |
| **Topiramate** | 25mg/day, titrate | Some RCT evidence; cognitive slowing |

**Managing Comorbidities:**

- ADHD: atomoxetine (preferred, treats ADHD without worsening tics), guanfacine ER, then stimulants (stimulants may transiently worsen tics but overall benefit outweighs)
- OCD: CBT (ERP) first-line; SSRI (fluoxetine, sertraline) if needed
- Anxiety: CBT; SSRI
- Depression: SSRIs + CBT

> **EXAM PEARL**
> Coprolalia (uttering obscene words) is present in only 10–15% of Tourette patients, NOT required for diagnosis. Tics can be temporarily suppressed (unlike compulsions). The premonitory urge is the sensory phenomenon preceding tics, it is the target of CBIT.

---

## Q9. Define and discuss Gaming Disorder as classified in ICD-11. (10 marks)

### Definition

Gaming Disorder (ICD-11 Code: 6C51) is classified under Disorders Due to Addictive Behaviors. It is defined as a pattern of persistent or recurrent gaming behavior

(digital/video gaming) characterized by:

1. **Impaired control** over gaming (onset, frequency, intensity, duration, termination, context)
2. **Increasing priority** given to gaming to the extent it takes precedence over other interests/activities
3. **Continuation or escalation** of gaming despite negative consequences

The behavior pattern is of sufficient severity to result in significant impairment in personal, family, social, educational, occupational, or other important areas of functioning. Duration: typically ≥12 months (shorter if severe and criteria clearly met).

## Epidemiology

- Prevalence: 1–10% (wide range; definitional variability)
- Male predominance: 3:1
- Peak age: adolescence and young adulthood (13–25 years)
- Asia-Pacific: higher rates (South Korea 10.2%)
- Risk factors: male sex, ADHD, social anxiety, depression, family dysfunction

## Neurobiology

Shares features with substance use disorders:

- Striatal dopamine release during gaming (similar to substance reward)
- Ventral striatum hyperactivation to gaming cues (craving)
- Reduced prefrontal control (impaired inhibition)
- Structural: reduced grey matter in PFC, insula, inferior frontal gyrus

## Assessment

**Instruments:**

- IGDS (Internet Gaming Disorder Scale, 9 items aligned with DSM-5 criteria for further study)
- Gaming Disorder Scale (GDS), aligned with ICD-11
- CAGE-Gaming: adapted version

**History:**

- Duration of gaming per day/week
- Functional impairment: sleep, academics, peer relationships, family conflicts
- Withdrawal symptoms when unable to game (irritability, anxiety)
- Repeated failed attempts to cut down
- Deception/lying about gaming

- Escapism: gaming to escape negative mood
- Comorbidities: ADHD, anxiety, depression, social phobia

**Distinguish from:**

- Highly engaged gaming without impairment (no diagnosis)
- Problematic internet use (broader, social media, pornography)
- Substance use disorders (different substance)

## Management

**Psychoeducation:**

- Present problem without shame; motivational framing
- Harm reduction initially if denial prominent

**Cognitive Behavioral Therapy (CBT):**

- Most evidence
- Cognitive: identify and challenge gaming cognitions ("I need to play to feel good"; "I'm only good at gaming")
- Behavioral: activity scheduling, reducing gaming time, alternative activities
- Relapse prevention: trigger identification, coping plans

**Motivational Interviewing (MI):**

- For ambivalent patients
- Explore discrepancy between gaming life and valued life
- Enhance intrinsic motivation for change

**Family Therapy:**

- Address enabling behaviors (parents providing unlimited gaming time)
- Improve communication and limit-setting
- Parental monitoring of screen time

**Pharmacotherapy:**

- No specific drug approved
- Treat comorbid ADHD (methylphenidate reduces gaming in ADHD + GD)
- Treat comorbid depression/anxiety (SSRIs)
- Bupropion: some positive data in small trials

**Structured Programs:**

- South Korea: National Youth Policy Institute programs; "digital detox" camps
- Evidence for intensive residential programs limited

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# Q10. Discuss the evaluation and management of Separation Anxiety Disorder in a 7-year-old. (10 marks)

## Introduction

Separation Anxiety Disorder (SAD) is the most common anxiety disorder in children under 12 years, characterized by developmentally inappropriate and excessive fear/anxiety concerning separation from attachment figures. In a 7-year-old, the primary concern is school refusal, somatic complaints, and excessive distress.

## Clinical Features

At age 7, expected:

- Some anxiety at transitions, new situations
- Occasional worry about parents

Pathological (SAD), ≥3 of:

- Excessive distress when separated (crying, tantrums, pleading)
- Persistent worry about harm coming to attachment figures
- Worry about being kidnapped or getting lost
- Reluctance/refusal to go to school
- Fear of being alone
- Refusing to sleep away from home / needing parent nearby
- Nightmares with separation themes
- Somatic complaints (morning headache/stomachache that resolves if allowed to stay home)

Duration ≥4 weeks in children.

## Assessment

**History:**

- Onset (sudden vs. gradual; precipitants: school change, illness, death in family, parental conflict)
- Specific triggers (school, sleep, separation from specific parent)
- Caregiver response (how parents react to distress)
- Accommodation patterns (co-sleeping, parents staying home, calling school frequently)
- Developmental history (temperament, behavioral inhibition; early attachment patterns)
- Family history (anxiety in parents, genetic + modeling)
- Comorbidities: GAD, specific phobia, ADHD

**Rating Scales:**

- SCARED (Screen for Child Anxiety Related Disorders), parent + child versions
- MASC (Multidimensional Anxiety Scale for Children)
- RCADS

## Management

**Principle:** Parent-child joint treatment. Parental accommodation maintains disorder.

**1. Psychoeducation:**

- Normal separation anxiety vs. SAD
- Brain's "alarm" system, anxiety is uncomfortable but not dangerous
- "Brave behaviors" approach, facing fears builds confidence
- Explain parental accommodation as inadvertently maintaining anxiety

**2. Cognitive Behavioral Therapy (CBT):**

Components for child:

- Relaxation (belly breathing, progressive muscle relaxation)
- Cognitive restructuring (challenge catastrophic thinking about harm to parents)
- Graded exposure hierarchy:
- Step 1: Parent leaves room for 1 minute
- Step 2: Parent in different part of house
- Step 3: Brief separation at school (teacher present)
- Step 4: Full school day
- Step 5: Overnight at grandparent's

Programs with evidence:

- Coping Cat (Kendall), well-validated CBT for child anxiety
- FRIENDS for Life (Barrett)

**3. Parent Training:**

- Reduce accommodation without increasing hostility
- Consistent, calm goodbye rituals (brief, positive, predictable)
- Brave behaviors: reward approaching feared situations (token economy)
- Avoid excessive reassurance

**4. School Liaison:**

- Brief, warm transition routines at school entry
- Trusted adult at school to support
- Gradual reintegration if school refusal has developed

**5. Pharmacotherapy:**

- Moderate-severe or non-response to CBT after 8–12 weeks
- First-line: Sertraline (10–25mg starting; titrate to 50–200mg)
- Fluoxetine: alternative
- CAMS trial: combination sertraline + CBT superior to either alone for child anxiety
- Duration: continue for 6–12 months after remission; taper slowly

> **CLINICAL ANCHOR**
> Parental accommodation (letting child stay home, calling school, co-sleeping) is the single most important maintenance factor for pediatric anxiety disorders including SAD. Successful treatment requires addressing accommodation directly with parents, not just treating the child.

---

## Q11. Discuss the presentation and management of a child with Tourette's and ADHD comorbidity. (10 marks)

*(See Q8 for Tourette's full discussion; this answer focuses on the comorbidity management challenge)*

### The Challenge

50–60% of TS patients have ADHD. The comorbidity creates significant management dilemmas:

- Stimulants (first-line ADHD) may worsen tics (transiently)
- Tic suppressing medications (antipsychotics) may worsen ADHD symptoms
- Both conditions impact academic and social functioning

### Clinical Presentation

Combination presentation:

- Inattention, hyperactivity, impulsivity (ADHD domain)
- Multiple motor + vocal tics (TS domain)
- Executive function deficits amplified
- Emotional dysregulation (common in both)
- Academic underperformance
- Social difficulties compounded

### Management Decision Framework

**Step 1, Which is causing more impairment?**

- If ADHD causing more impairment: treat ADHD first
- If tics causing more impairment: treat tics first

- If equal: may need simultaneous treatment

**Step 2, First-line pharmacological choice when ADHD is primary:**

| OPTION · REASONING | |
|---|---|
| **Guanfacine ER (first choice)** | Alpha-2A agonist; reduces ADHD symptoms AND tics; no tic risk |
| **Clonidine (alternative)** | Same mechanism; more sedating; also reduces tics |
| **Atomoxetine** | SNRI; does not worsen tics; treats ADHD; evidence in TS+ADHD |
| **Methylphenidate** | Historically contraindicated; NOW: practice guidelines say it CAN be used if ADHD impairment significant; may transiently worsen tics; long-term: may reduce tics via improved self-regulation |

**Step 3, Behavioral treatment:**

- CBIT for tics
- CBT/behavioral parent training for ADHD
- Combined can be done sequentially or simultaneously

**Step 4, Combination pharmacotherapy if needed:**

- Guanfacine/clonidine + methylphenidate (stimulant attenuates tics less than feared; guanfacine covers tics)
- Aripiprazole + atomoxetine (good tolerability)

**Academic support:**

- Extended time (both ADHD and tics affect test-taking)
- Breaks for tic suppression tension release
- Teacher education about tics (avoid calling attention to tics in class)

> **EXAM PEARL**
> The old teaching that stimulants are absolutely contraindicated in TS+ADHD is OUTDATED. Current guidelines (AACAP, 2013 onwards) state stimulants can be used when ADHD impairment is significant, with monitoring. Alpha-2 agonists (guanfacine, clonidine) are preferred first-line in this population.

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## Q12. Describe Reactive Attachment Disorder and Disinhibited Social Engagement Disorder: clinical features and management. (10 marks)

*(Combined answer format)*

## Background

Both RAD and DSED arise from extreme early caregiver deprivation, social neglect, abandonment, or institutional rearing. They represent different patterns of disrupted attachment.

## RAD: Clinical Features

**Core:** Emotionally withdrawn behavior toward adult caregivers:

- Rarely seeks comfort when distressed
- Rarely responds to comfort when offered

**Associated:** Persistent social/emotional disturbance (≥2 of):

- Minimal social/emotional responsiveness
- Limited positive affect
- Irritability, sadness, or fearfulness during non-threatening interactions

Child appears sad, fearful, or unresponsive. Caregiver cannot reach child emotionally.

## DSED: Clinical Features

**Core:** Indiscriminate social engagement with strangers (≥2 of):

- Reduced reticence with unfamiliar adults
- Overly familiar verbal or physical behavior (hugging stranger, climbing on lap)
- Diminished checking back with caregiver after venturing away
- Willingness to go off with unfamiliar adult

Child appears social but lacks discrimination, treats all adults as potential attachment figures.

## Key Distinctions

| FEATURE | RAD | DSED |
|---|---|---|
| **Core behavior** | Inhibited, withdrawn | Disinhibited, indiscriminate |
| **Response to comfort** | Absent/reduced | May seek comfort from anyone |
| **Safety risk** | Depression/neglect damage | Vulnerability to exploitation |
| **Response to stable caregiving** | Typically improves | May persist even after stabilization |
| **Confusion with ASD** | Some overlap | Less overlap |
| **History required** | Yes, extreme neglect | Yes, extreme neglect |

## Management

**1. Stable, Responsive Caregiving (primary intervention):**

- Place child with stable, committed caregiver (foster/adoptive if needed)
- Nurturing, predictable, responsive parenting
- RAD often improves significantly with stable placement
- DSED: may persist despite stability, protective adults must be informed

**2. Dyadic/Attachment-Based Therapy:**

- Dyadic Developmental Psychotherapy (DDP, Hughes)
- PACE model (Playfulness, Acceptance, Curiosity, Empathy)
- Theraplay: structured play-based dyadic therapy
- Parent-Child Interaction Therapy (PCIT), modified for attachment disorders
- **WARNING: "Holding therapy" / "Rebirthing", strongly contraindicated, dangerous, no evidence**

**3. Parenting Support:**

- Intensive training for foster/adoptive parents
- Understanding trauma responses (terror → rage → freeze)
- Avoid punitive discipline; trauma-informed parenting

**4. Safety Planning for DSED:**

- Inform caregivers, teachers about risk of going with strangers
- Safety rules training (who is safe to talk to/go with)
- Close supervision in public settings

**5. School Support:**

- Teacher education about attachment disorder presentations
- Consistent adult at school; clear, warm relational boundaries
- Behavioral support for emotional dysregulation

**6. Pharmacotherapy:**

- No specific medication for RAD/DSED
- Treat comorbid depression, anxiety, PTSD
- Stimulants if true ADHD comorbidity (distinguish DSED disinhibition from ADHD impulsivity)

**EXAM PEARL**

Holding therapy (forced prolonged holding to simulate birth canal, forcibly induce cathartic emotional responses) is a dangerous pseudotherapy associated with deaths. It is absolutely contraindicated. Questions about "innovative" attachment therapies, this is the red flag answer.

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| *SOURCES: KAPLAN & SADOCK (11TH ED.) | RUTTER'S (6TH ED.) | LEWIS'S (5TH ED.) | DSM-5-TR | ICD-11 | TADS, CAMS, MTA, TORDIA TRIALS* |
|---|---|---|---|---|---|

# Mnemonics & Memory Tricks

**Sources:** Kaplan & Sadock (11th ed.), Rutter's (6th ed.), Lewis's (5th ed.), DSM-5-TR, ICD-11

## MNEMONIC 1: ADHD Inattention Symptoms: "CLAMS FOLDS"

**C**, Careless mistakes in schoolwork / details

**L**, Listening problems (doesn't seem to listen when spoken to directly)

**A**, Activities not followed through / instructions not completed

**M**, Mental effort tasks avoided (sustained attention tasks)

**S**, Sustaining attention in tasks or play (difficulty)

**F**, Forgetful in daily activities

**O**, Organization difficulty (tasks, time, materials)

**L**, Loses things (pencils, homework, keys)

**D**, Distracted easily by extraneous stimuli

**S**, Structuring work difficulties (doesn't follow through)

> **EXAM PEARL**
> 6 of 9 inattention symptoms required (children); 5 of 9 (≥17 years). Duration ≥6 months. Present before age 12.

## MNEMONIC 2: ADHD Hyperactivity-Impulsivity: "FILTH BIBS"

**F**, Fidgets with hands/feet or squirms

**I**, Interrupts or intrudes on others

**L**, Leaves seat when expected to remain seated

**T**, Talks excessively

**H**, Has difficulty waiting turn

**B**, Blurts out answers before question completed

**I**, In leisure activities, difficulty being quiet

**B**, Busy, "on the go" / driven by a motor

**S**, Scrambles (runs/climbs in inappropriate situations)

## MNEMONIC 3: DSM-5 ADHD Key Rules: "BIST"

**B**, Before age 12 (onset of several symptoms)

**I**, Impairment in two or more settings

**S**, Six symptoms (inattentive OR hyperactive-impulsive; 5 if ≥17 years)

**T**, Time, ≥6 months duration

---

## MNEMONIC 4: Autism Spectrum Disorder Diagnostic Domains: "SOCIAL RRBI"

**SOCIAL** (Criterion A, all 3 must be present):

**S**, Social-emotional reciprocity deficit

**O**, Only limited response to others' social approaches

**C**, Communication, nonverbal deficits (eye contact, gesture, facial expression)

**I**, Integrate verbal and nonverbal behavior, failed

**A**, Adjust behavior to context, difficulty

**L**, Lack of interest in peers / relationship deficits

**RRBI** (Criterion B, 2 of 4 required):

**R**, Repetitive motor movements, use of objects, or speech (stereotypies, echolalia)

**R**, Routines, insistence on sameness, inflexible rituals

**B**, Bounded/fixated interests (abnormal intensity or focus)

**I**, Input, sensory hyper/hypo-reactivity

---

## MNEMONIC 5: ASD Early Red Flags: "No BaGel PieTa"

By 12 months:

**No B**abbling

**No G**estures (no pointing, waving)

**No** response to **Na**me

By 18 months:

**No** single **Pie**ce of language (no first words)

By 24 months:

**No** spontaneous **T**wo-word phrases

**a**ny regression in language or social skills (ANY age)

> **CLINICAL ANCHOR**
> Any regression at any age warrants IMMEDIATE referral, regardless of whether prior development was normal.

---

## MNEMONIC 6: Down Syndrome Features: "DOWNSY"

**D**, Duodenal atresia / Double bubble sign; Developmental delay

**O**, One palmar crease (single transverse palmar crease); Oblique palpebral fissures (upslanting)

**W**, Wide gap between 1st and 2nd toes; White Brushfield spots on iris

**N**, Neck, nuchal fold thickening (antenatally); hypotonia (Noodle-like)

**S**, Short stature; Simian crease; Septum defects (ASD, VSD, 40% cardiac defects)

**Y**, Youth → dementia (Alzheimer's by 40s; all adults with DS have Alzheimer's pathology by age 40)

**Additional features:** Flat facies, small ears, epicanthal folds, macroglossia, short neck, hypothyroidism, atlantoaxial instability, leukemia risk (20x increased)

> **EXAM PEARL**
> Trisomy 21 is the most common chromosomal cause of ID. 95% trisomy 21; 4% Robertsonian translocation (higher recurrence risk in parents); 1% mosaic (milder phenotype).

---

## MNEMONIC 7: Fragile X Features: "FRAG-X"

**F**, Forehead prominent; Face long; Family history (X-linked, males affected)

**R**, Repetitive speech (perseverative); Repetitive hand-flapping

**A**, Attention deficit (ADHD features); Anxiety (social anxiety); Avoids eye gaze

**G**, Giant testes (macro-orchidism, post-pubertal); Gaze aversion

**X**, X-linked inheritance (FMR1 gene, Xq27.3; CGG repeat expansion)

- Normal: <45 CGG repeats
- Premutation: 55–200 repeats (carrier; premature ovarian insufficiency in females; FXTAS in males)
- Full mutation: >200 repeats → gene silencing → absent FMRP

> **EXAM PEARL**
> Fragile X is the most common INHERITED cause of ID (Down syndrome is more common overall but mostly sporadic). Females with full mutation have milder phenotype (skewed X-inactivation). Sherman paradox: penetrance increases through generations.

---

## MNEMONIC 8: ADHD Medications: First to Last Line, "MALE GBC"

**M**, Methylphenidate (first-line stimulant)

**A**, Amphetamine/Lisdexamfetamine (first-line alternative stimulant)

**L**, Lisdexamfetamine (prodrug; lower abuse potential)

**E**, Extra second-line: Atomoxetine (NRI; non-stimulant)

**G**, Guanfacine ER (alpha-2A agonist; tics, ADHD)

**B**, Bupropion (off-label; depression comorbidity)

**C**, Clonidine (alpha-2; sleep, tics, ADHD)

---

## MNEMONIC 9: Conduct Disorder Risk Factors: "BAD PIGS"

**B**, Behavioral inhibition deficit; Brain dysfunction (neurobiology)

**A**, ADHD comorbidity; Abuse/neglect history

**D**, Deviant peer group; Deprivation (socioeconomic)

**P**, Parental antisocial personality / substance abuse

**I**, Impulsivity; IQ (low); Internalizing comorbidities (untreated depression)

**G**, Gang involvement; Genetics (50–70% heritability)

**S**, School failure; Social skills deficits; Stress (neighborhood violence)

---

## MNEMONIC 10: Child Abuse: TEN-4 FACES P (Bruising Concerning for Abuse)

**TEN-4** = Bruising on:

- **T**, Torso
- **E**, Ears
- **N**, Neck
- **4** = In infants under 4 months old (any bruise in non-mobile infant is suspicious)

**FACES P:**

- **F**, Frenulum (torn frenulum without plausible mechanism)

- **A**, Any patterned bruise
- **C**, Cheeks
- **E**, Eyes (periorbital without direct trauma)
- **S**, Spine/back
- **P**, Palms and soles (unusual locations for accidental bruising)

> CLINICAL ANCHOR
> Pre-mobile infants (< 6 months) should have virtually NO bruises from accidental trauma, "those who don't cruise, don't bruise." Any bruise in this age group requires explanation.

---

## MNEMONIC 11: Child Abuse Indicators: "MAPS"

**M**, Multiple injuries in various stages of healing; Munchausen by proxy (caregiver fabrication)

**A**, Age-inappropriate injuries (spiral fractures in non-ambulatory infant); Account inconsistent with injury

**P**, Pattern injuries (belt, cord, hand outline); Posterior rib fractures (pathognomonic for NAI)

**S**, Shaken baby triad: subdural hematoma + retinal hemorrhages + no external injury

---

## MNEMONIC 12: Tourette Syndrome: Diagnostic Criteria, "2+1 Before 18, Not a Year Free"

- **2** motor tics (or more)
- **+1** vocal tic (at least one)
- **Before 18** years onset
- **Not** during substance/medical condition
- **A** year duration (not necessarily continuous)
- **Free** of a tic-free period >3 consecutive months (this is NOT required in DSM-5, the tic-free period >3 months criterion was removed)

> KEY INSIGHT
> **EXAM PEARL DSM-5 update:** DSM-IV required no tic-free period >3 months. DSM-5 removed this requirement. Tics simply must have been present for >1 year total, with onset before 18.

---

## MNEMONIC 13: Enuresis Treatment: "BAD Choice"

(In order of preference)

**B**, Bell-and-pad (urine alarm), BEST long-term outcome, 75–85% success

**A**, ADH analogue (Desmopressin/DDAVP), good short-term; relapse on stopping

**D**, Dry-bed training (behavioral)

**C**, Clocks (bladder training for daytime enuresis)

**h**, then consider Imipramine if all else fails (cardiac risks; last resort)

> **EXAM PEARL**
> Bell-and-pad has the best LONG-TERM outcomes and lowest relapse rate. Desmopressin works faster but relapse rate ~80% on stopping. Imipramine, efficacy 40–50%, high relapse, cardiac risk → NOT first-line.

---

## MNEMONIC 14: ICD-11 Gaming Disorder Criteria: "3-I Rule"

**I**mpaired control, over gaming behaviors

**I**ncreasing priority, gaming takes precedence over other activities/interests

**I**gnoring consequences, continuation despite negative consequences (relationships, health, academics)

Duration: ≥12 months (shorter if severe)

Result: Significant functional impairment

---

## MNEMONIC 15: Specific Learning Disorders: "3 Ds of Reading, Writing, Math"

**D**yslexia, reading (phonological processing deficit)

**D**ysgraphia, writing (motor planning + language expression)

**D**yscalculia, maths (number sense, magnitude representation)

All are DSM-5 Specific Learning Disorder (315.xx) with specifier:

- With impairment in reading
- With impairment in written expression
- With impairment in mathematics

**Dyslexia key:**

- NOT a vision problem
- NOT about letter reversal (this is a myth)

- Core deficit: PHONOLOGICAL PROCESSING (mapping letters to sounds)
- IQ is typically NORMAL (not used in diagnosis anymore, discrepancy model abandoned)

---

## MNEMONIC 16: ADOS-2 Modules: "The MoToF Plan"

**Mo**, Toddler Module (12–30 months, pre-verbal or few words)

**1**, Module 1 (non-verbal/minimal verbal; single words)

**2**, Module 2 (phrase speech; sentences not fluent)

**3**, Module 3 (fluent verbal; children and adolescents)

**4**, Module 4 (fluent verbal; adults)

> **EXAM PEARL**
> Module selection is based on EXPRESSIVE LANGUAGE LEVEL, not age. A 10-year-old who is non-verbal uses Module 1, not Module 3.

---

## MNEMONIC 17: Williams Syndrome Features: "WILLS"

**W**, Wide forehead; "Wise old man" facial appearance

**I**, IQ = mild-moderate ID; but verbal IQ > spatial IQ (hyperlexia possible)

**L**, Loquacious and hypersocial ("cocktail party" personality); Loves music

**L**, Left heart defect (supravalvular aortic stenosis, pathognomonic)

**S**, Short stature; Sensitivity to sounds (hyperacusis); Stellate pattern of iris

**Genetics:** Deletion 7q11.23 (elastin gene + LIMK1)

**Calcium:** Hypercalcemia in infancy

---

## MNEMONIC 18: Prader-Willi vs Angelman: "PWS EATS, AS LAUGHS"

**PWS EATS:**

**P**, Paternal deletion 15q11 (or maternal UPD 15)

**W**, Weight gain/obesity (hyperphagia)

**S**, Short stature; Sleep apnea; Skin-picking

**E**, Emotional outbursts/tantrums; Endocrine (hypogonadism, short stature)

**A**, Almond-shaped eyes; Academic difficulties

**T**, Tone reduced (hypotonia at birth); Temperature instability

**S**, Stubbornness; Stealing food; Sleep disturbance

**AS LAUGHS:**

**A**, Angelman; Ataxic gait

**S**, Seizures (characteristic EEG)

**L**, Laughter/happy affect (inappropriately happy)

**A**, Absence of speech (minimal or no speech)

**U**, UPD maternal (or paternal 15q deletion / imprinting center defect)

**G**, Gait ataxia

**H**, Happy sociable disposition

**S**, Staring episodes; Severe ID

> EXAM PEARL
> Imprinting key: same region (15q11), different parent of origin → different syndrome. PATERNAL deletion/maternal UPD → PWS. MATERNAL deletion/paternal UPD → Angelman.

---

## MNEMONIC 19: Separation Anxiety Disorder: "SAFE NIGHT"

**S**, Separation distress (recurrent, excessive when anticipating/experiencing separation)

**A**, Attachment figure harm (persistent worry about caregiver being hurt/dying)

**F**, Finding self lost/kidnapped (worry about untoward event)

**E**, Exploring school, refusal/reluctance

**N**, Night alone, refusal to sleep away from home

**I**, I'm alone fear (fear of being alone without attachment figure)

**G**, Going off alone, persistent fear of separation at bedtime/nighttime

**H**, Horror of nightmares (separation-themed)

**T**, Tummy ache, headache (somatic complaints when separation occurs)

---

## MNEMONIC 20: Selective Mutism vs Social Anxiety vs ASD: "SPEAKS SELECTIVELY"

**Selective Mutism:**

- **Can** speak normally in comfort zone (home, family)
- Speech NOT impaired (language is normal)

- Mute in specific social contexts (usually school)
- Duration: ≥1 month (not limited to first month of school)
- Strong overlap with social anxiety disorder
- Treatment: graded exposure, stimulus fading, SSRIs (fluoxetine)

**NOT:**

- Language disorder (can speak normally elsewhere)
- ASD (social communication deficit is pervasive, not context-dependent)
- ODD (not wilful refusal; genuine anxiety-based)

> **EXAM PEARL**
> Selective mutism is best conceptualized as an extreme variant of social anxiety disorder, not a separate entity. Same treatment (exposure + SSRIs) applies.

---

## QUICK REFERENCE: GENETIC CONDITIONS COMPARISON

| CONDITION | GENE/CHROMOSOME | INHERITANCE | KEY MEMORY HOOK |
|---|---|---|---|
| **Down syndrome** | Trisomy 21 | Sporadic (mostly) | "21 = most common chromosomal" |
| **Fragile X** | FMR1 (CGG repeat) Xq27.3 | X-linked | "Most common INHERITED" |
| **Prader-Willi** | 15q11 paternal deletion | Imprinting | "Dad's deletion = fat and short" |
| **Angelman** | 15q11 maternal deletion | Imprinting | "Mum's deletion = happy and no speech" |
| **Williams** | 7q11.23 deletion | AD (de novo mostly) | "Elastin deletion = friendly + cardiac" |
| **Rett** | MECP2 (Xq28) | X-linked (de novo in females) | "Regression + hand-wringing" |
| **Tuberous Sclerosis** | TSC1 (hamartin) / TSC2 (tuberin) | AD | "Ash-leaf spots + seizures + ASD" |
| **PKU** | PAH gene | AR | "Preventable with diet" |
| **22q11 deletion** | 22q11.2 | AD | "Psychosis + cardiac + T-cell deficit" |

## QUICK REFERENCE: DRUG MECHANISMS

| DRUG | CLASS | MECHANISM (SIMPLIFIED) |
|---|---|---|
| **Methylphenidate** | Stimulant | Blocks DAT + NET → more dopamine/NE in synapse |
| **Lisdexamfetamine** | Stimulant prodrug | Cleaved to d-amphetamine; blocks + reverses DAT/NET |
| **Atomoxetine** | NRI | Selective NET blocker → more NE in PFC |
| **Guanfacine** | $\alpha$2A agonist | Post-synaptic $\alpha$2A in PFC → improves prefrontal signal |
| **Clonidine** | $\alpha$2 agonist (all subtypes) | Reduces NE turnover; presynaptic + postsynaptic |
| **Risperidone** | Atypical AP | D2 + 5HT2A antagonist → reduces dopamine excess in striatum |
| **Aripiprazole** | Atypical AP | Partial D2 agonist → stabilizes dopamine tone |
| **Melatonin** | Melatonin agonist | MT1/MT2 agonist → advances circadian phase, improves sleep onset |
| **Desmopressin** | Vasopressin analogue | V2 receptor → ADH effect → reduces nocturnal urine production |

| *SOURCES: KAPLAN & SADOCK (11TH ED.) | RUTTER'S (6TH ED.) | LEWIS'S (5TH ED.) | DSM-5-TR | ICD-11* |
|---|---|---|---|---|

# High-Yield Comparisons

**Sources:** Kaplan & Sadock (11th ed.), Rutter's (6th ed.), Lewis's (5th ed.), DSM-5-TR, ICD-11

## TABLE 1: ADHD vs Conduct Disorder vs ODD

| FEATURE | ADHD | ODD | CONDUCT DISORDER |
|---|---|---|---|
| **Core domain** | Inattention / hyperactivity-impulsivity | Angry mood / defiance / vindictiveness | Aggression / rule violation / deceitfulness |
| **Intentionality** | Unintentional, impulsive, not planned | Reactive and deliberate but emotionally driven | Deliberate; proactive aggression possible |
| **Conscience** | Intact, feels guilt after impulsive acts | Intact, justifies actions but guilt possible | May be impaired (CU traits in subset) |
| **Aggression type** | Reactive, unplanned | Reactive to perceived provocation | Both reactive AND proactive/predatory |
| **Peer relationships** | Rejected due to impulsivity/intrusiveness | Rejected due to argumentativeness | May have delinquent peer group (adolescent-onset) |
| **Onset** | Before age 12 (DSM-5) | Before age 12 typically | Childhood (<10) or adolescent onset |
| **Settings** | Pervasive, school, home, peers | May be setting-specific (mild ODD) | Often at school and community |
| **Academic impact** | Learning underperformance, disorganization | Variable, may achieve when cooperative | School refusal, truancy, exclusion |
| **Neurobiological** | PFC dopamine/NE; executive dysfunction | HPA dysregulation; emotion regulation deficit | Low cortisol, amygdala hyporeactivity (CU type) |
| **Comorbidity** | ODD (40%), CD (20%), anxiety, depression | ADHD (50–60%), CD (25%), anxiety | ADHD (50%), SUD, depression |
| **Prognosis** | Persists into adulthood (60–70%); manageable | 25–50% → CD; 25% remit | 25–40% → ASPD; worse in childhood-onset |
| **Treatment** | Stimulants + BPT | PMT, PSST; treat ADHD first | MST, FFT, PMT; stimulants for comorbid ADHD |

| FEATURE | ADHD | ODD | CONDUCT DISORDER |
|---|---|---|---|
| **CU Traits specifier** | No | Yes (Limited Prosocial Emotions) | Yes (Limited Prosocial Emotions) |
| **DSM-5 code** | 314.xx | 313.81 | 312.xx |

**EXAM PEARL**

ODD and CD can be comorbid with each other AND with ADHD. When ADHD + ODD/CD co-occur, treat ADHD first, stimulants reduce impulsivity and reactive aggression, often improving conduct significantly.

## TABLE 2: ASD Level 1 vs Level 2 vs Level 3

| FEATURE | LEVEL 1 ("REQUIRING SUPPORT") | LEVEL 2 ("REQUIRING SUBSTANTIAL SUPPORT") | LEVEL 3 ("REQUIRING VERY SUBSTANTIAL SUPPORT") |
|---|---|---|---|
| **Social communication** | Noticeable deficits without supports; difficulty initiating; reduced/atypical responses | Marked deficits; limited initiation; reduced/abnormal social response | Severe deficits; very limited initiation of interaction; minimal response |
| **Restricted/Repetitive behaviors** | Inflexibility causes significant interference in ≥1 context; difficulty switching | RRBIs markedly obvious; obvious to casual observer; interferes with functioning in diverse contexts | Extreme difficulty coping with change; intense distress; greatly interferes with functioning in all areas |
| **Communication style** | Uses full sentences; engages in conversation; may have one-sided conversation | Uses simple sentences; conversation limited to narrow interests | Few words of intelligible speech; may use AAC; no functional speech in some |
| **Independence** | Can function with some support; may hold a job; may live semi-independently | Requires daily support across most settings | Requires around-the-clock support; may not acquire daily living skills |
| **Formerly called (DSM-IV)** | Asperger's / High-Functioning Autism | Autistic Disorder (moderate) | Autistic Disorder (severe) |
| **ID comorbidity** | Less common | More common | Very common |
| **Epilepsy risk** | Lower | Moderate | Higher (20–30%) |
| **Prognosis** | Better, some independent living, employment | Variable, supported living | Severe impairment persists into adulthood |

EXAM PEARL

ASD severity levels describe CURRENT support needs, they are NOT a fixed trajectory. A Level 2 child with excellent early intervention may function at Level 1 level as an adult. Severity can shift. IQ/adaptive functioning are SEPARATE specifiers, not part of the level.

## TABLE 3: Methylphenidate vs Atomoxetine

| FEATURE | METHYLPHENIDATE (MPH) | ATOMOXETINE (ATX) |
|---|---|---|
| **Class** | CNS stimulant (Schedule II in US) | Selective norepinephrine reuptake inhibitor (SNRI), Non-stimulant |
| **Mechanism** | Blocks DAT + NET → increases synaptic dopamine and NE | Selectively blocks NET → increases NE (and secondarily DA in PFC) |
| **Onset of action** | Same day (30–60 min for IR) | 4–6 weeks for full therapeutic effect |
| **Duration** | IR: 4–6 hours; LA: 8–12 hours | Once-daily dosing; continuous coverage |
| **Schedule status** | Controlled substance (Schedule II) | NOT a controlled substance |
| **Abuse potential** | Yes (moderate-high for IR) | Very low |
| **Preferred when** | Core ADHD symptoms; no anxiety comorbidity; rapid response needed | Tic disorder; anxiety comorbidity; substance abuse history; family misuse concerns |
| **FDA approval (ADHD)** | Age 6+ (some formulations age 3+) | Age 6+ |
| **Appetite suppression** | Yes, significant | Mild, less than MPH |
| **Insomnia** | Yes, common | Less than MPH |
| **Tics** | May unmask/transiently worsen | Does NOT worsen tics |
| **Cardiovascular** | Modest HR/BP increase; screen for congenital cardiac | Modest HR/BP increase; tachycardia possible |
| **Black box warning** | None specific to ADHD | Suicidal ideation in children/adolescents (same as SSRIs) |
| **Hepatotoxicity** | No | Rare but reported, monitor if symptomatic |
| **Growth suppression** | Mild (0.5–1 cm/year) | Minimal |

| FEATURE | METHYLPHENIDATE (MPH) | ATOMOXETINE (ATX) |
|---|---|---|
| **Effect on anxiety** | May worsen anxiety | Beneficial for comorbid anxiety |
| **OCD/tic comorbidity** | Use with caution | Preferred |
| **Dosing** | Weight-based: 0.3–1.0 mg/kg/day | <70kg: 1.2 mg/kg/day; >70kg: 80–100mg/day |
| **Cost** | Generics available; low cost | Higher cost |

**EXAM STRATEGY**

The key differentiators examiners love: (1) Onset, MPH same day, ATX 4–6 weeks; (2) Schedule, MPH controlled, ATX not; (3) Preferred in tics/anxiety, ATX; (4) Black box, ATX has suicidality warning, MPH does not.

## TABLE 4: ICD-11 vs DSM-5: ASD and ADHD

| FEATURE | DSM-5 | ICD-11 |
|---|---|---|
| **ASD classification** | Single diagnosis: Autism Spectrum Disorder (299.00) with severity levels 1–3 | 6A02: Autism Spectrum Disorder, no subtyping by severity in ICD-11 per se; specifiers for intellectual impairment and functional language |
| **Asperger's** | Eliminated, subsumed into ASD | Eliminated, subsumed into ASD |
| **ASD + ADHD** | Both diagnoses allowed (DSM-5 change from DSM-IV which excluded ADHD in ASD) | Both diagnoses allowed |
| **ADHD name** | ADHD (presentations: combined, inattentive, hyperactive-impulsive) | 6A05: ADHD, same presentations; term "Attention Deficit Hyperactivity Disorder" retained |
| **ADHD in ICD-11 vs ICD-10** | N/A | ICD-10: Hyperkinetic Disorder (required combined, pervasive); ICD-11: ADHD with same breadth as DSM-5 |
| **Symptom threshold (ADHD)** | 6/9 under age 17; 5/9 age 17+ | ICD-11 aligned with this |
| **Age of onset** | Before age 12 | Before age 12 |
| **ASD criteria structure** | Criterion A (social communication) + Criterion B (RRBIs) | Qualitative descriptions aligned with same domains |
| **Sensory processing** | Included as Criterion B4 (hyper/hypo-reactivity) | Included |

| FEATURE | DSM-5 | ICD-11 |
|---|---|---|
| **Gaming Disorder** | Internet Gaming Disorder, "conditions for further study" (NOT official) | 6C51 Gaming Disorder, OFFICIAL diagnosis |
| **Intellectual Disability** | Severity by adaptive functioning (NOT IQ alone) | Same, severity by adaptive functioning |
| **Tic disorders** | Tourette's + Persistent + Provisional | ICD-11: Tourette's (8A05.00); Primary tic disorders retained |

EXAM PEARL

The most testable DSM-5 vs ICD-11 differences for child psychiatry: (1) Gaming Disorder, ICD-11 official, DSM-5 research only; (2) ADHD, ICD-10 Hyperkinetic Disorder (stricter) vs DSM-5/ICD-11 aligned; (3) Asperger's, gone in both; (4) ASD + ADHD dual diagnosis, now allowed in both.

## TABLE 5: Reactive Attachment Disorder (RAD) vs Disinhibited Social Engagement Disorder (DSED)

| FEATURE | RAD | DSED |
|---|---|---|
| **Core behavioral pattern** | Inhibited, emotionally withdrawn toward caregivers | Disinhibited, indiscriminate social engagement with strangers |
| **Caregiver behavior** | Avoids comfort-seeking from caregivers | Approaches strangers readily; no discrimination |
| **Emotional profile** | Reduced positive affect; irritability, sadness, fearfulness | May appear sociable and happy superficially |
| **Premonitory cause** | Extreme social neglect/deprivation (required) | Extreme social neglect/deprivation (required) |
| **Response to stable caregiving** | Typically improves significantly | May PERSIST even after stable, caring placement |
| **Safety concern** | Emotional/developmental harm from withdrawal | Vulnerability to exploitation by strangers |
| **ASD confusion** | May be confused with ASD (both show limited social responsiveness) | Less confusion with ASD |
| **ADHD overlap** | Less common | DSED + ADHD: can coexist; distinguish DSED disinhibition from ADHD impulsivity |

| FEATURE | RAD | DSED |
|---|---|---|
| **Attachment pattern** | No organized attachment strategy | Attachment may form with caregiver, but indiscriminate with others |
| **Age of recognition** | Before age 5 (must be evident) | Before age 5 |
| **Treatment response** | Better to dyadic/attachment therapies | More treatment-resistant |
| **Primary treatment** | Stable, responsive caregiving; dyadic therapy | Caregiver education + safety planning; dyadic therapy |
| **Prohibited treatment** | Holding therapy (absolutely contraindicated) | Holding therapy (absolutely contraindicated) |
| **DSM-5 code** | 313.89 | 313.89 (separate from RAD) |

CLINICAL ANCHOR

The critical point about DSED: it can persist despite excellent, stable caregiving, unlike RAD. Children adopted from institutions early may still show DSED features years later. This has important implications for foster/adoptive parents who may feel they have "failed" despite doing everything right.

## TABLE 6: Primary vs Secondary Enuresis

| FEATURE | PRIMARY ENURESIS | SECONDARY ENURESIS |
|---|---|---|
| **Definition** | Never achieved dryness for ≥6 consecutive months | Onset after at least 6 months of established continence |
| **Prevalence** | More common (80%) | Less common (20%) |
| **Organic workup** | Routine (hearing, developmental check) | MORE RIGOROUS, higher organic yield |
| **Organic causes to rule out** | Rarely organic; maturational | UTI, diabetes mellitus, diabetes insipidus, constipation with overflow, structural urological abnormality |
| **Psychosocial triggers** | Less prominent | More important, new baby, divorce, bereavement, abuse, school change |
| **Genetics** | Strong family history (70% if both parents, 44% if one parent affected) | Less familial |
| **Response to treatment** | Good, bell-and-pad effective | Treat underlying cause first; then bell-and-pad |

| FEATURE | PRIMARY ENURESIS | SECONDARY ENURESIS |
|---|---|---|
| **Associated with psychiatric disorder** | Less | More, stress-linked onset |
| **EEG** | Not indicated | Not indicated unless seizures suspected |
| **DDAVP** | Effective | Effective once organic causes addressed |

EXAM PEARL

Secondary enuresis (onset after 6 months dryness) always warrants investigation for organic causes: UTI (most common medical cause), diabetes mellitus (polyuria), constipation, structural urological problems. Psychosocial stressors are common precipitants.

## TABLE 7: Childhood Depression vs Adult Depression

| FEATURE | CHILDHOOD DEPRESSION | ADULT DEPRESSION |
|---|---|---|
| **Mood presentation** | Irritability may predominate over sadness (DSM-5 allows) | Sadness / depressed mood predominant |
| **Cognitive features** | Developmentally simpler (less rumination; concrete negative thoughts) | Abstract rumination, guilt, hopelessness more typical |
| **Somatic complaints** | More common (headache, stomach ache) | Less prominent |
| **Psychomotor changes** | May be more agitation than retardation | Either agitation or retardation |
| **Psychotic features** | Rare | More common in severe depression |
| **Anhedonia** | Boredom, play refusal, withdrawal from peers | Anhedonia classic; loss of pleasure in previous interests |
| **School** | School refusal, academic decline | Occupational impairment |
| **Suicidality** | Less lethal ideation; plans less detailed; impulsive attempts | More lethal means; more planned; completed suicide more common |
| **Comorbidity** | Anxiety (>50%), ADHD, CD common | Anxiety, SUD, pain conditions |
| **Antidepressants** | Fluoxetine (age 8+), Escitalopram (age 12+) | Full range of antidepressants |

| FEATURE | CHILDHOOD DEPRESSION | ADULT DEPRESSION |
|---|---|---|
| **Response to SSRIs** | Good but lower NNT than adults; combination with CBT superior | SSRIs effective; augmentation strategies well-studied |
| **Black box warning** | Yes, suicidal ideation (FDA BBW) | No pediatric warning for adults |
| **Psychotherapy** | CBT (Coping Cat, ACTION program); TF-CBT if trauma | CBT, IPT, psychodynamic all evidence-based |
| **TADS equivalent** | TADS (adolescents) | STAR*D (adults) |
| **Biological features** | Less HPA axis abnormality; growth hormone blunting | HPA hyperactivation; dexamethasone non-suppression |

## TABLE 8: ABA vs ESDM vs TEACCH

| FEATURE | ABA (APPLIED BEHAVIOR ANALYSIS) | ESDM (EARLY START DENVER MODEL) | TEACCH (STRUCTURED TEACHING) |
|---|---|---|---|
| **Theoretical basis** | Skinnerian operant conditioning | Developmental + ABA hybrid; relationship-based | Structured teaching; cognitive disability model |
| **Age range** | Any age (most evidence <5 years) | 12–60 months | Any age; school-age to adult |
| **Intensity** | 20–40 hours/week (intensive models) | 20–25 hours/week | Variable; lower intensity (classroom-based) |
| **Approach** | Adult-directed; discrete trial training | Child-directed play; adult follows child's lead | Structured environment; visual supports |
| **Learning context** | Mostly table-based (DTT); also NET | Natural play environments; everyday routines | Structured physical and temporal environment |
| **Visual supports** | Used in some models | Yes | Central feature (picture schedules, work systems) |
| **Evidence base** | Strongest overall; multiple RCTs; decades of research | Strong, Dawson et al. (2010) RCT; developmental gains superior to community tx | Moderate; primarily observational; widely accepted in schools |
| **Criticism/controversy** | Historical concerns about aversives (no longer used); intensity/rigidity; child-led balance | More recent; less long-term data | Less intensive, may not drive change as much in severe ASD |

| FEATURE | ABA (APPLIED BEHAVIOR ANALYSIS) | ESDM (EARLY START DENVER MODEL) | TEACCH (STRUCTURED TEACHING) |
|---|---|---|---|
| **Best suited for** | Skill acquisition across any level; challenging behavior | Young children, early intervention window | School settings, life skills, transition planning |
| **Delivered by** | BCBA (Board Certified Behavior Analyst) + therapy team | Trained therapists + parent coaching | Trained educators + parents |
| **Parent involvement** | Variable by program | Central, parents trained as co-therapists | Yes, home carryover |
| **Generalization** | Targeted explicitly (NET improves generalization) | Built-in through natural context | Built-in through routine/structure |
| **NICE guidance** | Included in guidance | Included | Included |

**EXAM STRATEGY**

ESDM is the most examined newer approach, know the Dawson 2010 RCT finding (superior developmental gains vs community treatment as usual in 18–30 month olds). ABA has the most cumulative evidence. TEACCH is the most commonly implemented in school settings. All three are recommended in NICE guidelines for ASD.

## TABLE 9: Haloperidol vs Aripiprazole for Tics (Tourette Syndrome)

| FEATURE | HALOPERIDOL | ARIPIPRAZOLE |
|---|---|---|
| **Class** | Typical (first-generation) antipsychotic | Atypical (third-generation); partial D2 agonist |
| **Mechanism** | Potent D2 blockade | Partial D2 agonism (stabilizer); 5HT1A partial agonist |
| **Tic efficacy** | Highest of all agents, most evidence historically | Good, comparable to risperidone; several RCTs |
| **Starting dose** | 0.25–0.5mg/day; titrate slowly | 2mg/day; titrate to 5–20mg/day |
| **EPS risk** | HIGH, dystonia, parkinsonism, akathisia | Low |
| **Tardive dyskinesia** | Significant risk with long-term use | Low |
| **Weight gain** | Moderate | Moderate |

| FEATURE | HALOPERIDOL | ARIPIPRAZOLE |
|---|---|---|
| **Metabolic effects** | Moderate | Less than risperidone; moderate |
| **Prolactin elevation** | Yes, significant | Minimal (actually reduces prolactin, partial D2 agonist) |
| **Sedation** | Significant | Mild–moderate |
| **Current clinical preference** | Last resort, when all others failed | First-choice antipsychotic for tics currently |
| **Comorbid ADHD** | Does not address ADHD | Adjunct with alpha-2 agonist for ADHD |
| **Monitoring** | EPS check, tardive dyskinesia (AIMS), prolactin | Metabolic (weight, glucose, lipids), AIMS |

**EXAM PEARL**

Haloperidol has the MOST EVIDENCE for tic reduction but the WORST SIDE EFFECT PROFILE. Aripiprazole is the CURRENT PREFERRED antipsychotic for tics. Exam may test both, know the distinction between evidence base vs. clinical preference.

## TABLE 10: Methylphenidate Formulations Comparison

| FORMULATION | BRAND (EXAMPLE) | RELEASE PROFILE | DURATION | NOTES |
|---|---|---|---|---|
| **Immediate Release (IR)** | Ritalin | Single peak | 4–6 hours | 2–3x daily dosing; rebound effect |
| **Sustained Release (SR)** | Ritalin SR | Continuous | 6–8 hours | Inconsistent absorption; largely replaced |
| **OROS (Osmotic Release)** | Concerta | 22% IR + 78% osmotic | 10–12 hours | Once-daily; gold standard LA; most studied |
| **Bimodal (LA)** | Ritalin LA | 50% IR + 50% delayed | 8–10 hours | Simulates twice-daily IR |
| **Extended Release Beads** | Medikinet XL | 40% IR + 60% ER | 8–10 hours | Can be sprinkled on food |
| **Liquid** | Quillivant XL | Extended release suspension | 10–12 hours | For children who cannot swallow tablets |

| FORMULATION | BRAND (EXAMPLE) | RELEASE PROFILE | DURATION | NOTES |
|---|---|---|---|---|
| **Transdermal patch** | Daytrana | Continuous (worn 9h) | 10–12h (remove patch) | Skin irritation common; flexible dosing |

**CLINICAL ANCHOR**

Concerta (OROS-MPH) is the best-studied once-daily formulation. The 22/78 IR/LA split is designed to replicate three-dose IR schedule pharmacokinetically. Switching between formulations requires re-titration, dose equivalence is NOT 1:1.

## TABLE 11: Intellectual Disability Severity: Functional Comparison

| SEVERITY | IQ RANGE | CONCEPTUAL SKILLS | SOCIAL SKILLS | PRACTICAL SKILLS | EDUCATIONAL PROGNOSIS |
|---|---|---|---|---|---|
| **Mild** | ~50–69 | Below grade level; literacy possible; abstract thinking limited | Immature but functional; gullible; friendship possible | Some self-care independence; simple employment possible; needs support for complex decisions | Educable; can reach ~6th grade academic level |
| **Moderate** | ~35–49 | Limited literacy (few words); simple math; relies on concrete | Simple language; close relationships with familiar others; can participate in supervised social settings | Basic self-care with training; semi-independent in familiar settings; simple job tasks | Trainable; can learn basic vocational skills |
| **Severe** | ~20–34 | Minimal conceptual skills; simple language understood; few words expressed | Relies on close familiar relationships; limited verbal communication | Requires support for most ADLs; may achieve some self-care skills with extensive training | Requires lifelong support; some communication possible |
| **Profound** | <20 | Relies on sensory/physical interaction; no symbolic function | Pre-symbolic; nonverbal communication; responds to familiar persons | Fully dependent; care needs are extensive | Requires total care; minimal independent function |

KEY INSIGHT

**EXAM PEARL, DSM-5 CRITICAL:** In DSM-5, SEVERITY IS DETERMINED BY ADAPTIVE FUNCTIONING, NOT IQ. IQ ranges are provided only as approximate guides. A person with IQ 52 who has strong adaptive skills (supported by family, good social environment) may have MILD ID by DSM-5, not moderate. The examiner may specifically test this.

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| *SOURCES: KAPLAN & SADOCK (11TH ED.) | RUTTER'S (6TH ED.) | LEWIS'S (5TH ED.) | DSM-5-TR | ICD-11* |
|---|---|---|---|---|

# PYQ Frequency Analysis

**Sources:** PG exams MD Psychiatry question papers (collated 2008–2025), PG exams, and Exam pattern analysis. Kaplan & Sadock (11th ed.), Rutter's (6th ed.), Lewis's (5th ed.)

**EXAM STRATEGY**

Child & Adolescent Psychiatry consistently contributes 1–2 long questions (10–20 marks) and 2–4 short notes (5 marks each) in Paper III. Total expected contribution: 25–40 marks out of ~100 in Paper III. The topics below are ranked by frequency of appearance across 17+ years of question data.

## SECTION 1: FREQUENCY RANKING TABLE

| RANK | TOPIC | FREQUENCY | TYPICAL FORMAT | MARKS |
|---|---|---|---|---|
| 1 | ADHD, assessment and management | Very High (appears ~80% of years) | Long question | 10–20 |
| 2 | Autism Spectrum Disorder, features, assessment, management | Very High (~75% of years) | Long question | 10–20 |
| 3 | Intellectual Disability, classification, etiology, assessment | High (~65% of years) | Long question or short note | 10–15 |
| 4 | Child abuse, types, indicators, management, POCSO | High (~60% of years) | Long question or short note | 10–15 |
| 5 | Conduct Disorder, features, management | Moderate-High (~50% of years) | Long question or short note | 10 |
| 6 | School refusal, classification, management | Moderate (~45% of years) | Short note or combined | 5–10 |
| 7 | Tourette Syndrome, criteria, treatment | Moderate (~40% of years) | Short note | 5–10 |

| RANK | TOPIC | FREQUENCY | TYPICAL FORMAT | MARKS |
|---|---|---|---|---|
| 8 | Enuresis, assessment, treatment | Moderate (~40% of years) | Short note | 5–10 |
| 9 | Separation Anxiety Disorder | Moderate (~35% of years) | Short note | 5 |
| 10 | Pediatric depression, pharmacotherapy, TADS | Moderate (~35% of years) | Short note or part of long Q | 5–10 |
| 11 | Munchausen by Proxy / Factitious Disorder Imposed on Another | Moderate (~35% of years) | Short note | 5 |
| 12 | Specific Learning Disorders, dyslexia | Moderate (~30% of years) | Short note | 5 |
| 13 | Fragile X Syndrome | Moderate (~30% of years) | Short note | 5 |
| 14 | Down Syndrome, features, psychiatry | Moderate (~30% of years) | Short note | 5 |
| 15 | Attachment Disorders, RAD vs DSED | Low-Moderate (~25% of years) | Short note | 5 |
| 16 | Gaming Disorder (ICD-11) | Low-Moderate (~20% of years, rising) | Short note | 5 |
| 17 | Selective Mutism | Low-Moderate (~20% of years) | Short note | 5 |
| 18 | ODD, diagnostic criteria | Low (~15% of years) | Short note | 5 |
| 19 | Encopresis | Low (~15% of years) | Short note | 5 |
| 20 | Rett Syndrome | Low (~15% of years) | Short note | 5 |

# SECTION 2: HIGH-FREQUENCY TOPIC DEEP DIVES

## Topic 1: ADHD: The Perennial Long Question

**Why it appears every year:** ADHD is the highest-prevalence child psychiatry diagnosis, has clear pharmacological management points, and tests both clinical knowledge and therapeutic decision-making.

**What examiners consistently ask:**

- "Discuss the assessment and management of ADHD" (most common phrasing)
- "Enumerate the DSM-5 criteria for ADHD"
- "Compare methylphenidate and atomoxetine"
- "What are the behavioral interventions in ADHD?"
- "What is the MTA study? What are its findings?"

**Examiner hotspots, points that distinguish good from excellent answers:**

| POINT | COMMON ANSWER | DISTINGUISHING ANSWER |
|---|---|---|
| **Age of onset** | Age 12 | DSM-5 changed from age 7 (DSM-IV) to age 12, mentioning this change is a mark-earner |
| **Symptom threshold adults** | Same as children | DSM-5: 5 symptoms (not 6) for adults ≥17 years |
| **Stimulant side effects** | Appetite, insomnia | Mention growth suppression (modest 0.5–1 cm/year), cardiovascular monitoring, rebound phenomenon |
| **Atomoxetine onset** | "Works for ADHD" | Onset is 4–6 WEEKS, not same-day like stimulants. This is tested specifically. |
| **MTA study** | "Medication works" | Combined > medication alone > behavioral alone > placebo for core symptoms; combined better for comorbid anxiety |
| **Non-pharmacological** | "Counseling" | Name specific programs: BPT, Triple P, Incredible Years, Daily Report Card, classroom accommodations |

**Template answer structure (20-mark question):**

1. Introduction + epidemiology (2 marks)
2. DSM-5 criteria in full, both domains (4 marks)

3. Assessment, history, rating scales, investigations, differentials (5 marks)
4. Management, multimodal: psychoeducation + behavioral + pharmacotherapy + school (7 marks)
5. Follow-up and prognosis (2 marks)

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## Topic 2: Autism Spectrum Disorder

**What examiners consistently ask:**

- "Describe the clinical features and management of ASD"
- "What is the role of ADOS-2 and ADI-R in diagnosis of ASD?"
- "Enumerate early red flags of autism"
- "Compare DSM-IV and DSM-5 criteria for ASD" (Asperger's elimination)
- "What are the pharmacological options in ASD?"

**Examiner hotspots:**

| POINT | COMMON ANSWER | DISTINGUISHING ANSWER |
|---|---|---|
| **Criteria structure** | "Social problems + repetitive behaviors" | Criterion A (all 3 social communication items) AND Criterion B (2 of 4 RRBI items), know the structure |
| **DSM-5 change** | "ASD is a spectrum" | Asperger's eliminated; severity levels 1–2–3; ADHD now allowed as comorbidity |
| **Severity levels** | "Mild/moderate/severe" | Level 1/2/3 with specific descriptors for EACH level in BOTH domains |
| **Screening tool** | "M-CHAT" | M-CHAT-R/F at 16–30 months; sensitivity/specificity after follow-up |
| **Gold standard diagnosis** | "Clinical assessment" | ADOS-2 + ADI-R together, know what each assesses |
| **Pharmacotherapy** | "Risperidone" | Risperidone AND aripiprazole are the ONLY FDA-approved agents (for irritability, not core symptoms). Mention melatonin for sleep. |
| **Intervention** | "ABA" | Distinguish ABA, ESDM (Dawson 2010 RCT), TEACCH, know key features of each |

**Genetic investigations point (frequently missed):**

Chromosomal microarray is first-tier genetic investigation, not karyotype. Yield 15–20% for clinically significant variants. This is a specific, testable fact.

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## Topic 3: Intellectual Disability

**What examiners consistently ask:**

- "Classify intellectual disability", this is the classic opener
- "Describe the etiology of intellectual disability"
- "Enumerate the behavioral phenotypes of common genetic syndromes"
- "How is Down syndrome distinguished from other causes of ID?"

**Examiner hotspots:**

| POINT | COMMON ANSWER | DISTINGUISHING ANSWER |
|---|---|---|
| **DSM-5 severity** | "Based on IQ" | Based on ADAPTIVE FUNCTIONING, IQ is a guide only. This is a specific DSM-5 change from DSM-IV. |
| **Most common chromosomal cause** | "Down syndrome" | Correct. Trisomy 21 (95%), Robertsonian translocation (4%), mosaic (1%). |
| **Most common inherited cause** | Often missed | Fragile X syndrome (FMR1, CGG repeat expansion, X-linked) |
| **Most common preventable cause** | Often missed | PKU (dietary) OR FASD (alcohol abstinence), accept both, clarify context |
| **Adaptive behavior assessment** | "IQ test" | Vineland-3 is the gold standard adaptive behavior measure, separate from IQ testing |
| **Chromosomal microarray** | Rarely mentioned | First-tier genetic investigation; higher yield than karyotype |
| **Psychiatric comorbidity** | "Behavioral problems" | Prevalence 30–40%; diagnostic overshadowing is a specific concern |

**Behavioral phenotype table is exam gold, know these cold:**

- Down: sociable, stubborn, Alzheimer's risk
- Fragile X: social anxiety, gaze avoidance, perseverative speech, hand-flapping
- Angelman: happy, laughter, seizures, no speech
- Prader-Willi: hyperphagia, skin-picking, food-seeking, rigidity

- Williams: loquacious, hypercalcemia, supravalvular aortic stenosis

## Topic 4: Child Abuse

**What examiners consistently ask:**

- "Describe the types and indicators of child abuse"
- "What is Munchausen by proxy? How is it recognized?"
- "What is the role of the psychiatrist in cases of child abuse?"
- "Discuss POCSO Act 2012" (specifically for Indian exams)
- "What is the forensic interview? What are its principles?"

**Examiner hotspots:**

| POINT | COMMON ANSWER | DISTINGUISHING ANSWER |
|---|---|---|
| **Physical abuse indicators** | "Bruises and fractures" | Specific suspicious patterns: TEN-4 FACES P for bruises; posterior rib fractures; bucket-handle metaphyseal fractures; spiral fractures in non-mobile infants |
| **Abusive head trauma triad** | Often incomplete | Subdural hematoma + retinal hemorrhages + no external injury, HIGH SPECIFICITY combination |
| **Munchausen by proxy** | "Mother makes child sick" | DSM-5 term = Factitious Disorder Imposed on Another; perpetrator most commonly mother; illness resolves with separation; key features |
| **Forensic interview standard** | "Interview the child" | NICHD Protocol, open-ended questions first; no leading questions; single interview preferred; trained professional only; before medical examination |
| **Mandatory reporting India** | "Report to authorities" | POCSO Act 2012 Section 19, ALL persons must report; SJPU or local police; failure = criminal offense (Section 21) |
| **Long-term consequences** | "Trauma" | Specific: PTSD, BPD, depression, substance use, HPA dysregulation, hippocampal atrophy, epigenetic changes |

### Topic 5: Conduct Disorder

**What examiners consistently ask:**

- "Discuss the management of conduct disorder"
- "What are the differences between ODD and conduct disorder?"
- "What is the role of multisystemic therapy?"
- "What are callous-unemotional traits?"

**Examiner hotspots:**

| POINT | COMMON ANSWER | DISTINGUISHING ANSWER |
|---|---|---|
| **Management** | "Counseling and medication" | MST (Multisystemic Therapy) is the gold standard for serious adolescent CD, name it and describe it |
| **CU traits** | "Lack of empathy" | DSM-5 "Limited Prosocial Emotions" specifier; predicts worse prognosis; treatment modification needed (reward-based, not punishment-based) |
| **Pharmacotherapy** | "No specific drug" | Correct, no drug for CD itself; treat ADHD (stimulants, strongest evidence); mood stabilizers (lithium) for severe aggression; risperidone for residual aggression |
| **Childhood vs adolescent onset** | Often not distinguished | Childhood onset: before 10; more male; ADHD comorbidity; worse prognosis.<br>Adolescent onset: peer-influenced; more female; better prognosis. |

## SECTION 3: MEDIUM-FREQUENCY TOPICS: RAPID REVISION

### School Refusal

**Key examiner points:**

- NOT a DSM diagnosis, functional presentation
- Distinguish from TRUANCY (distress vs. no distress; parents aware vs. unaware)
- Kearney-Silverman 4 functions, know all four
- Core principle: **rapid return to school**, mention this first
- Parental accommodation is the key maintenance factor

- Pharmacotherapy: SSRIs if CBT insufficient; CAMS trial evidence

### Tourette Syndrome

**Key examiner points:**

- Coprolalia in only 10–15%, NOT required for diagnosis (most common misconception tested)
- DSM-5 removed the ≥3 month tic-free period requirement (DSM-IV had it)
- CBIT is first-line behavioral treatment, know components (HRT + functional intervention)
- Aripiprazole currently preferred pharmacotherapy (not haloperidol, most evidence but worst side effects)
- ADHD comorbidity: guanfacine ER preferred (treats both)
- Premonitory urge, specific, testable concept

### Enuresis

**Key examiner points:**

- Primary vs secondary distinction, secondary requires more investigation
- Bell-and-pad: best long-term outcomes; 75–85%; 8–12 weeks
- Desmopressin: faster but high relapse rate (~80% on stopping)
- Imipramine: falling out of favor; cardiac toxicity; toxic in overdose, not first-line
- Watch for hyponatremia with desmopressin (restrict fluids)

### Munchausen by Proxy

**Key examiner points:**

- DSM-5 name: Factitious Disorder Imposed on Another
- Perpetrator: mother >90% of cases
- Illness resolves when separated from perpetrator, pathognomonic
- Mother appears devoted, medically knowledgeable, calm during child's crises
- Mandatory reporting applies
- Management: immediate safety of child; remove from perpetrator

### Pediatric Depression and TADS

**Key examiner points:**

- TADS: combination 71% > fluoxetine 61% > CBT 43% > placebo 35%
- Fluoxetine: FDA-approved age 8+ for depression; age 7+ for OCD
- Escitalopram: FDA-approved age 12+ for depression

- Black box warning: suicidal IDEATION (not completed suicide); ~2% absolute increase over placebo
- Combined treatment protects against suicidal ideation associated with medication alone
- Duration: 6–12 months post-remission

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## SECTION 4: EMERGING TOPICS (RISING FREQUENCY)

### Gaming Disorder (ICD-11)

**Why it's rising:** ICD-11 released 2022; examiners testing new classifications.

**Key points:**

- ICD-11 Code 6C51: OFFICIAL diagnosis (DSM-5 lists as "condition for further study" only)
- Three criteria: impaired control + increasing priority + continuation despite consequences
- Duration: ≥12 months
- Neurobiological overlap with substance use disorders (striatal dopamine, PFC inhibitory control)
- Treatment: CBT (most evidence), MI, family therapy
- India-specific: awareness of gaming cafes, online gaming culture in adolescents

### Specific Learning Disorders

**Why it's rising:** Greater awareness in Indian school system; ADHD + SLD comorbidity questions.

**Key points:**

- DSM-5 umbrella term covers dyslexia, dyscalculia, dysgraphia under specifiers
- Dyslexia = phonological processing deficit (NOT a vision problem, NOT letter reversal myth)
- IQ discrepancy model abandoned in DSM-5 (SLD with average IQ is still SLD)
- Treatment: systematic phonics instruction (Orton-Gillingham), not just "extra time"

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## SECTION 5: QUESTION FORMATS AND ANSWER TEMPLATES

### Long Question Template (20 marks): ADHD or ASD

### Short Note Template (5 marks)

### Comparison Question Template (10 marks)

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## SECTION 6: MOST TESTED SPECIFIC FACTS (HIGH-YIELD ONE-LINERS)

FACT · ANSWER

**Most common psychiatric referral in children** ADHD

**DSM-5 ADHD age of onset criterion** Before age 12 (changed from 7 in DSM-IV)

**ADHD adult symptom threshold** 5 of 9 (not 6)

**MTA study, best outcome** Combined treatment (medication + behavioral)

**ASD gold standard diagnostic tools** ADOS-2 + ADI-R together

**ASD screening tool 16–30 months** M-CHAT-R/F

**ASD, only FDA-approved drugs (what they treat)** Risperidone + aripiprazole, for irritability/aggression (not core symptoms)

**Asperger's in DSM-5** Eliminated, subsumed into ASD Level 1

**ID severity determined by (DSM-5)** Adaptive functioning (NOT IQ score alone)

**Most common chromosomal cause of ID** Down syndrome (trisomy 21)

**Most common inherited cause of ID** Fragile X syndrome

**Most common preventable cause of ID** PKU (dietary) / FASD (alcohol)

**Fragile X gene** FMR1 (CGG repeat expansion >200) on Xq27.3

**Imprinting, Prader-Willi** PATERNAL deletion 15q11 (or maternal UPD)

**Imprinting, Angelman** MATERNAL deletion 15q11 (or paternal UPD)

**Williams syndrome deletion** 7q11.23 (elastin gene)

**Tourette's, coprolalia prevalence** 10–15% (NOT required for diagnosis)

**Tourette's, CBIT components** HRT (awareness + competing response) + functional intervention

**Tourette's, preferred pharmacotherapy currently** Aripiprazole (not haloperidol)

**Enuresis, best long-term treatment** Bell-and-pad (urine alarm), 75–85% success

**Desmopressin, main risk** Hyponatremia (must restrict fluids)

**Child abuse, abusive head trauma triad** Subdural hematoma + retinal hemorrhages + no external injury

**POCSO Act, reporting obligation** ALL persons must report; failure = criminal offense

**Mandatory reporter India, POCSO section** Section 19 (reporting); Section 21 (penalty for non-reporting)

**Munchausen by proxy, DSM-5 name** Factitious Disorder Imposed on Another

**School refusal, distinguishing from truancy** School refusal = distress + home with parent's knowledge; truancy = no distress + parents unaware

**TADS, best outcome arm** Combined fluoxetine + CBT: 71% response

**Pediatric depression FDA approvals** Fluoxetine (age 8+), Escitalopram (age 12+)

**Black box warning, antidepressants in children** Increased suicidal IDEATION (not completed suicide); ~2% absolute increase

**Gaming disorder, ICD-11 code** 6C51 (official diagnosis); DSM-5 = research only

**Gaming disorder, duration criterion** ≥12 months (shorter if severe)

**RAD vs DSED, persistence after good care** RAD improves; DSED may persist despite stable caregiving

**Holding therapy** Absolutely contraindicated, associated with deaths; no evidence

**Selective mutism, core feature** Context-specific mutism; normal language at home; anxiety-based

**Dyslexia, core deficit** Phonological processing (NOT vision problem, NOT letter reversal)

**ADOS-2 module selection basis** Expressive language level (not age)

**Down syndrome, Alzheimer's** ALL DS adults have Alzheimer's pathology by age 40; APP gene on chromosome 21

**Chromosomal microarray, indication** First-tier genetic investigation in ASD and ID; 15–20% yield

**ASD + ADHD dual diagnosis** Allowed in DSM-5 (was excluded in DSM-IV)

## SECTION 7: PREDICTIVE PRIORITY LIST FOR EXAM 2026

Based on 17+ years of question patterns AND recent ICD-11/DSM-5 changes creating new testable material:

### Tier 1: Prepare for 20-mark long question

1. **ADHD, assessment and management** (appears almost every year)
2. **ASD, clinical features + assessment pathway** (appears almost every year)
3. **Intellectual disability, classification + evaluation** (high frequency)

### Tier 2: Prepare for 10-mark long question OR 5-mark short note

1. **Child abuse**, indicators + POCSO Act + management
2. **Conduct Disorder**, management (MST emphasis)
3. **Pediatric depression**, TADS + pharmacotherapy
4. **Tourette Syndrome**, criteria + CBIT + pharmacotherapy

### Tier 3: Prepare 5-mark short note only

1. School refusal
2. Enuresis (bell-and-pad vs desmopressin)
3. Munchausen by proxy / FDIA
4. Selective mutism
5. Fragile X syndrome
6. Down syndrome + Alzheimer's
7. Gaming disorder (ICD-11)
8. RAD vs DSED
9. Specific learning disorders (dyslexia)

### Tier 4: Know the headline facts only

1. Encopresis
2. Rett syndrome
3. Prader-Willi vs Angelman (imprinting)
4. Williams syndrome

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KEY INSIGHT

**EXAM STRATEGY, FINAL:** For Paper III Child & Adolescent section, the safest strategy is: (1) Master ADHD and ASD completely, one of these WILL appear as a long question; (2) Have a solid 10-mark answer for ID and child abuse; (3) Know the short note format for Tourette's, enuresis, school refusal, and Munchausen by proxy; (4) Know the ICD-11 specific points, Gaming Disorder, ADHD reclassification, these are new and examiners are testing them.

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| *SOURCES: PG EXAMS MD PSYCHIATRY QUESTION COLLATION 2008–2025 | KAPLAN & SADOCK (11TH ED.) | RUTTER'S (6TH ED.) | LEWIS'S (5TH ED.) | DSM-5-TR | ICD-11* |
|---|---|---|---|---|---|

# Quick Review

**Note:** All names, identifying details, and clinical scenarios are entirely fictitious. Any resemblance to real persons is coincidental.

**Sources:** Kaplan & Sadock (11th ed.), Rutter's (6th ed.), Lewis's (5th ed.), DSM-5-TR, ICD-11

## VIGNETTE 1: ADHD: School-Age Child

### Case

Arjun, 8 years old, is brought by his mother with complaints that "he just can't sit still and never finishes his work." His class teacher has sent three written notes home this term. She reports that Arjun gets up from his seat frequently, disturbs classmates, rarely completes written work, loses his pencil box "every other day," and stares out the window during lessons. His mother says he is the same at home, unable to sit through dinner, always interrupting conversations, leaves his homework half-done. He was a full-term normal delivery with no perinatal complications. Developmental milestones were normal. His father had "similar problems in school." Physical examination is unremarkable. Visual acuity and hearing are normal.

### Questions

**Q1: What is the most likely diagnosis? Enumerate the diagnostic criteria.**

**Most likely diagnosis:** ADHD, Combined Presentation (DSM-5: 314.01)

**DSM-5 Criteria met:**

- **Inattention (≥6 symptoms present for ≥6 months):** fails to attend to details (careless mistakes), difficulty sustaining attention (stares out of window), doesn't follow through on instructions (unfinished homework), disorganized (loses pencil box), avoids sustained mental effort (incomplete written work), easily distracted
- **Hyperactivity-Impulsivity (≥6 symptoms):** leaves seat when expected to remain, talks excessively (disturbs classmates), interrupts others (cuts into conversations)
- **Onset before age 12:** symptoms present since early school years
- **Two or more settings:** school AND home
- **Functional impairment:** academic, social

**Q2: What rating scales would you use, and how would you proceed with assessment?**

Rating scales:

- **Conners-3** (parent + teacher versions), gold standard

- **SNAP-IV** (parent + teacher), directly maps to DSM criteria
- **Vanderbilt ADHD Scale**, primary care friendly; screens for comorbidities

Assessment:

- Full developmental and family history (father's similar history suggests genetic loading)
- Academic records, class teacher report
- Medical: thyroid function (if clinically indicated), hearing/vision screen (done, normal), iron levels if fatigue/pallor
- Neuropsychological: WISC-V (rule out learning disability; profile PFC executive function)
- BRIEF (Behavior Rating Inventory of Executive Function)

**Q3: Outline a management plan.**

Multimodal approach:

1. **Psychoeducation**, parents and teacher; explain brain-based model; reduce blame
2. **Behavioral Parent Training**, Incredible Years or Triple P; positive attention, reward charts, consistent consequences
3. **School accommodations**, preferential seating, Daily Report Card, extended time, movement breaks
4. **Pharmacotherapy**, Methylphenidate (start 0.3 mg/kg IR; titrate to 0.5–1.0 mg/kg/day LA formulation); monitor weight, BP, sleep, appetite
5. **Follow-up**, monthly initially; biannual height/weight; annual reassessment

> EXAM PEARL
> Two-setting impairment is mandatory. Arjun has symptoms at school AND home, this satisfies the criterion. A child with ADHD-like behavior only at school may have a learning disorder or anxiety instead.

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## VIGNETTE 2: Autism Spectrum Disorder: Early Presentation

### Case

Kavya, 2 years 4 months, is brought by her parents to the pediatric OPD. Her mother reports: "She doesn't look at us when we call her name, doesn't point at things she wants, and just lines up her toy cars for hours." Kavya was walking by 13 months. She said "mama" and "ball" at 14 months but stopped using these words by 18 months. She does not combine words. During the consultation, Kavya does not make eye contact with the examiner, does not look at her mother when the examiner waves a toy, and spends the session spinning the wheels of a toy car repetitively. She does not respond to her name

being called three times. She becomes extremely distressed when her mother attempts to remove the toy car.

## Questions

**Q1: What is the most likely diagnosis? What are the concerning features?**

**Most likely diagnosis:** Autism Spectrum Disorder (ASD), pending full assessment

**Concerning features:**

- **Language regression** (words at 14 months, lost by 18 months), any regression at any age is a red flag
- **Absent joint attention** (no pointing, no looking at examiner's toy)
- **No response to name** (multiple times)
- **Absent eye contact**
- **Restricted, repetitive behavior** (wheel-spinning stereotypy, insistence on maintaining toy)
- **Extreme distress at routine change**
- **No spontaneous two-word phrases at 28 months**

**Q2: What screening tool is appropriate, and what does it assess?**

**M-CHAT-R/F** (Modified Checklist for Autism in Toddlers, Revised with Follow-Up):

- Age: 16–30 months, appropriate for Kavya
- 20 yes/no parent-completed items
- Screens for: response to name, pointing, joint attention, interest in other children, imitative play
- Scoring: Low risk (0–2), Medium risk (3–7 → do follow-up interview), High risk (8–20)
- Kavya would score high risk (failure on multiple critical items)
- Follow-up interview improves sensitivity/specificity

**Q3: Outline the comprehensive assessment pathway.**

1. **Developmental pediatrician/child psychiatrist** assessment
2. **ADOS-2 Toddler Module** (12–30 months, minimal verbal), structured observation
3. **ADI-R**, structured parent interview for developmental history
4. **Vineland-3**, adaptive behavior assessment
5. **Mullen Scales of Early Learning**, cognitive and language
6. **Speech and language therapy** evaluation
7. **Occupational therapy**, sensory profile, fine motor
8. **Hearing test** (mandatory)

9. **Medical investigations:** chromosomal microarray (first-tier genetic), Fragile X testing, EEG (regression + concern for Landau-Kleffner)
10. **Ophthalmology**

**Q4: What early interventions would you recommend?**

- **ESDM** (Early Start Denver Model), 20–25h/week; evidence for 18–30 month developmental gains
- **Speech and language therapy**, intensive, communication-focused
- **Occupational therapy**, sensory integration, play development
- **Parent-mediated intervention**, JASPER (Joint Attention, Symbolic Play, Engagement and Regulation)
- Begin **immediately**, do not wait for formal diagnostic confirmation when red flags are clear

> CLINICAL ANCHOR
> Language regression at any age requires urgent assessment. In Kavya's case, regression + no joint attention + stereotypies at 28 months = ASD until proven otherwise. Do not reassure parents that "she'll catch up."

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## VIGNETTE 3: Intellectual Disability with Behavioral Problems

### Case

Rohan, 14 years old, has been known to a special school for the past 5 years with a diagnosis of moderate intellectual disability (IQ 42 on WISC-V, obtained 3 years ago). He is brought to psychiatry OPD by his mother with a 3-month history of increased self-biting, head-banging against the wall, and episodes of screaming for 30–60 minutes, occurring 3–5 times daily. His mother reports no recent change in routine or family circumstances. Physical examination reveals a long face, prominent ears, and she mentions he has been "always shy" with people. She is a known carrier of Fragile X.

### Questions

**Q1: What is the likely etiology of this patient's ID, and what behavioral phenotype would you expect?**

**Likely etiology:** Fragile X Syndrome (FMR1 full mutation, X-linked)

- Clinical clues: long face, prominent ears, male, moderate ID, maternal carrier status
- Behavioral phenotype expected:
- Social anxiety and gaze avoidance
- Repetitive/perseverative speech

- Hand-flapping (may have been present in childhood)
- ADHD-like features (hyperactivity, impulsivity)
- Sensory hypersensitivity

**Q2: What is the differential diagnosis for the increase in self-injurious behavior (SIB)?**

CAUSE · CLINICAL CLUES

**Pain/medical cause** Otitis media, dental pain, GERD, constipation, common in ID and may present as SIB

**Anxiety** Change in routine (even subtle); new sensory trigger

**New psychiatric disorder** Depression (withdrawn, sleep/appetite change), psychosis (looking at unseen stimuli)

**Epilepsy** Post-ictal behavioral change; EEG indicated

**Puberty** Hormonal changes → emotional dysregulation

**Side effect of medication** If on any psychotropic

**Environmental change** New staff at school, peer interactions

> CLINICAL ANCHOR
> In ID, behavioral change is communication, the child cannot say "my ear hurts" or "I'm scared of the new teacher." The FIRST step is always ruling out PAIN and MEDICAL causes.

**Q3: How would you assess and manage this presentation?**

**Assessment:**

- Full medical examination: ears (otoscopy), teeth, abdomen (constipation)
- Sleep history (insomnia common in Fragile X)
- Functional Behavior Assessment (FBA): antecedents, behavior, consequences (ABC chart) over 2 weeks
- Psychiatric evaluation: depression (may present as SIB in ID), anxiety, emerging psychosis
- EEG (consider given regression and SIB)

**Management:**

- **Treat underlying medical cause** if found
- **Functional Behavior Analysis** → function-based behavioral intervention
- **Environmental modifications:** predictable routine, visual schedules, sensory accommodations

- **Pharmacotherapy (if behavioral and medical causes addressed):**
- Risperidone (FDA-approved for irritability in ASD; used off-label in ID): 0.25–0.5mg, titrate slowly
- SSRI if anxiety component prominent (sertraline)
- Melatonin for sleep
- **Caregiver support and training**
- **School consultation**

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## VIGNETTE 4: Child Abuse: Non-Accidental Injury

### Case

Siddharth, 9 months old, is brought to the emergency department. His mother states he "rolled off the bed" this morning. On examination, he is irritable and difficult to console. The attending pediatrician finds: two circular burns (approximately 0.8 cm diameter) on the left buttock, a bruise on the right ear, and an older healing bruise on the neck. There are no other external injuries. An urgent CT brain is performed, revealing bilateral thin subdural hematomas. Ophthalmology reports bilateral retinal hemorrhages on fundoscopic examination. The mother appears anxious but does not ask about the CT findings.

### Questions

**Q1: What does this clinical picture suggest, and what specific features support this?**

**Clinical picture:** Non-Accidental Injury (NAI) / Abusive Head Trauma, high probability

**Supporting features:**

FEATURE · SIGNIFICANCE

**Age 9 months (pre-mobile)** Pre-mobile infants virtually never sustain accidental bruises, "those who don't cruise, don't bruise"

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**Circular burns on buttock** Shape and location consistent with cigarette burns

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**Bruise on ear** TEN-4 rule: bruising on **E**ar in infant < **4** months (age extends to pre-mobile) = suspicious

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**Bruise on neck** TEN-4 rule: bruising on **N**eck = suspicious

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**Healing bruise on neck** Multiple injuries in different stages of healing

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**Bilateral subdural hematomas** Classic for shaken baby / abusive head trauma

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**Bilateral retinal hemorrhages** Highly specific for abusive head trauma when combined with subdural hematomas

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**History (rolled off bed)** Mechanism inconsistent with extent of intracranial injury, low falls from bed do not cause bilateral SDH + retinal hemorrhages

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**Mother's affect** Absence of appropriate concern about CT findings

**Q2: What is the immediate management?**

1. **Admit** to pediatric ward (safe environment; further evaluation)
2. **Full skeletal survey** (mandatory): posterior rib fractures, metaphyseal fractures (bucket-handle), multiple fractures in different stages of healing
3. **Ophthalmology** consultation (already done, retinal hemorrhages confirmed)
4. **Neurosurgical** review (bilateral SDH)
5. **Mandatory report to Child Protection Services** immediately, reasonable suspicion is sufficient; do not wait for certainty
6. **SJPU/Police notification** under POCSO Act 2012 (India), Section 19
7. **Do NOT return child to parents** until child protection investigation complete
8. **Forensic documentation**, photograph all injuries with scale bar, detailed medical notes

**Q3: What are the long-term consequences of abusive head trauma?**

- Cognitive impairment (40–60%)
- Epilepsy (20–30%)
- Visual impairment (50%)
- Motor deficits / cerebral palsy
- Language delay
- Behavioral problems, ADHD-like symptoms
- PTSD

> EXAM PEARL
> The triad for abusive head trauma: **subdural hematoma + retinal hemorrhages + no external signs of trauma**. The absence of external bruising on the head does NOT rule out AHT. The mechanism is acceleration-deceleration, not direct impact.

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## VIGNETTE 5: Conduct Disorder: Adolescent

### Case

Vikram, 15 years old, is referred by the juvenile justice board following his third arrest in 6 months for theft. His mother reports that problems started at age 11: he began staying out late, was suspended from school at 12 for fighting, and has been truanting for the past year. He has broken into a neighbor's garage and stolen tools, was caught shoplifting twice, and

threatened a classmate with a knife at 13. He shows no remorse: "They had it coming." He has a history of cruelty to neighborhood cats. His father has a history of antisocial personality disorder and alcohol dependence. Vikram has no learning difficulties; his IQ is estimated at 96. Neuropsychological testing shows intact working memory but impaired emotion recognition (fearful and sad faces).

## Questions

**Q1: Diagnose and describe the clinical features present.**

**Diagnosis:** Conduct Disorder, Childhood-Onset Type, Severe, with Limited Prosocial Emotions (Callous-Unemotional traits)

**Features present:**

- Aggression: threatened with a knife (weapon use), fighting at school
- Destruction: broke into neighbor's garage
- Deceitfulness/theft: shoplifting, theft from neighbor
- Rule violations: truancy, staying out (before 13), running away implied
- **Callous-Unemotional (CU) traits:** absent remorse ("they had it coming"), impaired emotion recognition, cruelty to animals
- Childhood onset (<10 not specified but problems from 11, early adolescent onset)
- Risk factors present: paternal ASPD and alcohol dependence

**Q2: What is the significance of callous-unemotional (CU) traits in this case?**

CU traits (the "Limited Prosocial Emotions" specifier) indicate:

- Absence of guilt/remorse
- Callousness and lack of empathy
- Unconcerned about performance
- Shallow affect

Clinical implications:

- **Worse prognosis**, CU traits predict persistence into adult ASPD
- **Standard PMT less effective**, punishment-based approaches fail because fear conditioning is blunted (amygdala hyporeactivity)
- **Reward-based approaches preferred**, enhanced reward sensitivity; use positive reinforcement
- Impaired emotion recognition (fearful/sad faces) consistent with CU neurobiological profile (reduced amygdala activation to fear cues)
- **Specialist input required**, standard behavioral interventions insufficient

**Q3: What treatment approach has the strongest evidence for Vikram's presentation?**

**Multisystemic Therapy (MST):**

- Community-based, intensive (3–5 months)
- Addresses ALL systems: family, peer, school, neighborhood
- Home visits, multiple contacts per week
- Addresses family dysfunction (mother needs support given absent/antisocial father)
- Separates Vikram from delinquent peers
- Evidence: superior to individual therapy, group therapy, residential treatment for serious juvenile offenders
- Particularly indicated given: juvenile justice involvement, risk of out-of-home placement

**Pharmacotherapy:**

- Treat if ADHD comorbidity suspected (assessment needed)
- Mood stabilizers (lithium) for severe impulsive aggression if present
- Low-dose risperidone as last resort for severe aggression

> EXAM STRATEGY
> MST is the gold-standard answer for adolescent CD with justice involvement. Name it, explain it. CU traits + poor emotion recognition + childhood-onset = high-risk profile. This vignette has everything the examiner wants to test.

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## VIGNETTE 6: Selective Mutism

### Case

Priya, 5 years 8 months, was referred by her school after being in KG for 6 months without speaking a single word. Her teachers report she follows instructions, participates in group activities, and seems to understand everything, but has never spoken to a teacher, classmate, or school staff member. She communicates via gestures and nodding. Her parents report she is "completely normal at home", she talks non-stop with family, narrates stories, and has age-appropriate language. She was assessed by a speech therapist who found normal receptive and expressive language in the home context. She is the elder of two children; family relationships are described as warm and close. She appears anxious in new situations and has always been "shy."

### Questions

**Q1: What is the diagnosis and how does it differ from language disorder and ASD?**

**Diagnosis:** Selective Mutism (DSM-5: 312.23)

**Criteria met:**

- Consistent failure to speak in specific social situations (school) despite speaking in others (home)
- Interferes with educational achievement
- Duration: ≥1 month (not limited to first month of school)
- Not due to language disorder (normal language confirmed by SLT)

**Distinguishing from language disorder:**

- Language disorder: impaired language IN ALL SETTINGS
- Selective mutism: normal language in comfort zone; mutism is context-specific

**Distinguishing from ASD:**

- ASD: social communication deficits are PERVASIVE, not context-limited; additional RRBIs
- Selective mutism: speaks normally at home; social engagement with family is normal; no RRBIs

**Q2: How would you assess this child?**

- Detailed history: onset, settings where mute vs. speaks, temperament (behavioral inhibition since infancy), family history (anxiety, selective mutism)
- School observation (or report): what child CAN do (participates non-verbally, follows instructions)
- Parent-completed anxiety rating: SCARED (Screen for Child Anxiety Related Disorders)
- Rule out: hearing impairment, language disorder, ASD (already largely ruled out)
- Psychological assessment: formal assessment in comfort setting to document language normality

**Q3: Outline the management plan.**

**1. Psychoeducation:**

- Selective mutism = anxiety-based, not willful defiance
- School staff must NOT pressure child to speak; avoid drawing attention to mutism in class
- No "just speak" demands

**2. Behavioral Intervention (first-line):**

- **Stimulus fading:** Priya speaks to mother → introduce trusted adult progressively closer → eventually adult takes over conversation
- **Shaping:** reward approximations to speech (whisper → quiet voice → normal voice)
- **Systematic desensitization:** graded exposure hierarchy
- Speaks to mother in hallway outside classroom

- Whispers to teaching assistant
- Speaks to teaching assistant in quiet room
- Speaks to one classmate with mother present
- Speaks in small group
- Full class participation

**3. School Collaboration:**

- Trained teaching assistant as "bridging" adult
- Avoid cold-calling; allow written/gesture responses initially
- Celebrate non-verbal participation

**4. Pharmacotherapy (if no response after 3–4 months of behavioral intervention):**

- **Fluoxetine** (most evidence for selective mutism): start 5mg, titrate to 10–20mg
- SSRI works by reducing background anxiety level, making exposure more manageable
- Medication + behavioral intervention superior to either alone

> EXAM PEARL
> Selective mutism is best conceptualized as extreme social anxiety, not a communication disorder or willful behavior. The single most important school intervention is removing pressure to speak while simultaneously implementing graded exposure. Do NOT ignore the mutism hoping it resolves, prolonged mutism entrenches the pattern.

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## VIGNETTE 7: Tourette Syndrome

### Case

Aarav, 11 years old, is brought by his parents with a 2-year history of "habits he can't control." His parents describe eye blinking that started at age 9, later joined by nose twitching, then head jerking. In the last 6 months, he has developed throat-clearing and sniffing sounds that occur many times daily. He can sometimes suppress these "for a bit" but feels a building tension that is relieved only by performing them. They are worse when he is excited, stressed, or at the end of the school day. His teachers initially thought he had an eye problem. He has been teased at school. His parents deny any obscene words. He has trouble sitting still in class and his teacher says he "doesn't listen", he forgets instructions and loses his pencil frequently. His uncle was described as having similar movements as a child.

### Questions

**Q1: Diagnose and justify.**

**Diagnosis:** Tourette Syndrome (DSM-5: 307.23)

**Criteria met:**

- **≥2 motor tics:** eye blinking + nose twitching + head jerking (multiple motor tics)
- **≥1 vocal tic:** throat-clearing + sniffing (vocal tics)
- **Onset before age 18:** onset age 9
- **Duration >12 months:** 2-year history
- **Not caused by substance or medical condition**

**Additional features:**

- Premonitory urge (building tension relieved by tic), highly characteristic
- Temporary suppression possible, also characteristic
- Waxing and waning; worse with stress/excitement
- No coprolalia (present in only 10–15%, not required for diagnosis)
- Family history (uncle), autosomal dominant with variable penetrance

**Comorbidity identified:** ADHD (inattention, forgets instructions, loses pencil, poor listening), needs formal assessment

**Q2: How would you assess the severity of tics?**

**Yale Global Tic Severity Scale (YGTSS):**

- Clinician-administered semi-structured interview
- Motor and vocal tic subscales
- For each: number of tics, frequency, intensity, complexity, interference
- Total Tic Score (0–50) + Impairment Rating (0–50)
- Global Severity Score = Total + Impairment
- Used for monitoring treatment response

**Additional:**

- PUTS (Premonitory Urge for Tics Scale)
- CPTS (Children's Premonitory Urge for Tics Scale)
- Classroom observation / teacher report
- Peer relationship assessment (teasing documented)

**Q3: Outline treatment, prioritizing the comorbidity question.**

**Step 1, Determine primary source of impairment:**

- Tics: teasing, social embarrassment, significant
- ADHD: classroom dysfunction, significant
- Both need addressing; start with the one causing more functional impairment

**Step 2, Behavioral treatment for tics:**

- **CBIT (Comprehensive Behavioral Intervention for Tics)**, first-line
- Habit Reversal Training: awareness training + competing response (competing movement physically incompatible with tic)
- Functional intervention: identify tic triggers
- Relaxation training
- School psychoeducation to reduce teasing

**Step 3, Pharmacotherapy for tics (if CBIT insufficient or unavailable):**

- **Aripiprazole** 2mg/day (current preferred choice), better tolerability than typical antipsychotics
- **Guanfacine ER** 1mg nocte, preferred if ADHD comorbidity present (addresses both)
- NOT haloperidol as first-line (EPS risk)

**Step 4, Address ADHD:**

- Formal assessment first (Conners-3, Vanderbilt)
- First-line given TS: **Guanfacine ER** (treats both tics and ADHD)
- Atomoxetine as alternative
- Stimulants: can be added if alpha-2 agonist insufficient; monitor tics (may transiently worsen but long-term usually acceptable)

> EXAM PEARL
> The premonitory urge is the sensory phenomenon PRECEDING the tic, a feeling of tension, itch, or pressure that is relieved by performing the tic. It is the TARGET of CBIT (competing response is trained to replace the tic in response to the premonitory urge). Understanding this mechanism is tested.

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## VIGNETTE 8: Gaming Disorder

### Case

Rahul, 16 years old, is brought by his parents who are "at their wit's end." Over the past 14 months, Rahul has been playing online multiplayer games for 10–14 hours daily on weekdays and throughout weekends. He stopped attending school 3 months ago ("online school is better anyway"). He sleeps from 4am to 2pm, eats only when his mother brings food to his room, and has not met friends in person in 6 months. When parents attempt to restrict internet, he becomes extremely agitated, has punched a wall, and once threatened to harm himself. He has tried to cut down gaming multiple times ("I'll stop after this level") but has not managed. His parents describe him as previously a bright student with good social relationships. He denies depression but admits gaming "stops me feeling bad."

## Questions

**Q1: Diagnose using ICD-11 criteria.**

**Diagnosis:** Gaming Disorder (ICD-11: 6C51)

**Criteria:**

1. **Impaired control over gaming**, persistent despite attempts to reduce; unable to stop at planned time; gaming 10–14h/day
2. **Increasing priority**, gaming takes precedence over sleep (4am–2pm sleep reversal), food (eats only when brought), school (dropped out), socializing (no peer contact 6 months)
3. **Continuation despite negative consequences**, school dropout, social isolation, health neglect (sleep reversal, eating), family conflict, self-harm threat

**Duration:** 14 months (minimum 12 months met)

**Impairment:** Educational, social, family, physical health

**Additional features:**

- Withdrawal symptoms: agitation, aggression when access restricted
- Escapism: "stops me feeling bad", using gaming to regulate negative affect
- Failed attempts to control

**Q2: What comorbidities would you screen for?**

COMORBIDITY · SCREENING

**Depression** PHQ-A (Patient Health Questionnaire, Adolescent); self-harm threat may indicate depressive disorder

**Social anxiety** SCARED; history of social avoidance pre-gaming

**ADHD** Vanderbilt/Conners; impulsivity, attention problems

**Sleep disorder** Sleep diary; severe circadian reversal (4am–2pm)

**Suicidal ideation** C-SSRS; self-harm threat needs formal risk assessment

**Q3: Outline the management plan.**

**1. Risk Assessment (immediate):**

- Clarify self-harm threat: specific plan, intent, access to means
- Psychosocial risk assessment: family dynamics, triggers

**2. Psychoeducation:**

- Motivational Interviewing: explore discrepancy between gaming life and his own values
- Frame as a health problem, not moral failure

- "Gaming used to work for you; now it's working against you"

**3. CBT:**

- Cognitive: challenge gaming cognitions ("I'm only good at gaming," "Real life is pointless")
- Behavioral: activity scheduling, gradually introduce non-gaming activities that provide positive experience; sleep hygiene protocol (gradual circadian shift)
- Graded reduction rather than abrupt cessation
- Identify emotional triggers for gaming (negative affect coping chain)

**4. Family Therapy:**

- Address enabling patterns (food delivery to room; unrestricted internet access)
- Improve communication and conflict resolution
- Parental limit-setting strategies (negotiated, not imposed)
- Address parental guilt and blame

**5. School Reintegration:**

- Partial attendance first; identify school-related stressors
- Educational assessment if learning difficulties contributed

**6. Pharmacotherapy:**

- Treat comorbid depression (SSRI, sertraline/fluoxetine)
- Treat ADHD if confirmed (methylphenidate reduces gaming impulsivity)
- No specific medication for gaming disorder

**7. Intensive Programs:**

- If outpatient fails: structured day program with scheduled activity and limited digital access
- Inpatient only if severe self-harm risk or medical neglect

> **CLINICAL ANCHOR**
> The self-harm threat in context of gaming restriction is a KEY clinical finding. Before any gaming-focused intervention, complete a formal suicide/self-harm risk assessment. Abrupt "cold turkey" gaming restriction in a patient with this level of dependence carries real risk of crisis, work with the family to plan a gradual, negotiated reduction.

---

# VIGNETTE 9: School Refusal

## Case

Ananya, 9 years old, has missed 22 of the last 30 school days. Each morning, she complains of severe stomach pain and headache starting around 7am. She cries, clings to her mother, and begs to stay home. When her mother agrees, the pain resolves within 30 minutes. She has had extensive gastroenterology workup, all investigations normal. She is described as a "sensitive, worrying child" who has always been reluctant to separate from her mother. Her school reports that when she does attend, she stays close to her teacher and does not participate in group activities. She was fine in her previous school; this school change occurred 4 months ago. Her mother, who has GAD, agrees that "school is quite stressful for children."

## Questions

**Q1: Classify this presentation using the functional model and identify the driving function.**

**Kearney-Silverman Functional Classification:**

This presentation fits **Function 3: Attention-seeking / avoidance of separation anxiety:**

- Primary driver: **Separation Anxiety Disorder** underlying school refusal
- Somatic symptoms (stomach pain, headache) emerge in the morning, resolve immediately when separation avoided
- Clingy behavior, crying, difficulty leaving mother
- Background: sensitive temperament (behavioral inhibition), maternal GAD (models anxious world view)

Also some **Function 1** (avoidance of negative affect related to new school):

- Previous school = comfortable; new school = unfamiliar = aversive

**Q2: What is the key first principle of management, and why?**

**Key principle: Rapid return to school.**

Every additional day of absence:

- Reinforces avoidance (the behavior works, staying home removes anxiety)
- Increases school-related anxiety (the longer the absence, the more "catastrophic" return seems)
- Widens the gap with peers academically and socially
- Entrenches the somatic complaint → school avoidance behavior pattern

Even partial attendance (2 hours/day) is better than complete absence. The goal is any foothold in school from which to build.

**Q3: Outline a treatment plan including role of parental factors.**

**School liaison:**

- Meet with school: identify specific triggers (which part of school day triggers anxiety? Assembly? Lunch? Specific teacher?)
- Arrange: trusted adult to receive Ananya at school gate; quiet room if anxiety escalates; reduced initial demands
- Graduated plan: 1 hour day 1 → 2 hours day 3 → half day week 2 → full day week 3

**CBT for Ananya:**

- Psychoeducation: explain anxiety cycle (avoidance = short-term relief, long-term prison)
- Graded exposure hierarchy (see above)
- Relaxation: diaphragmatic breathing for somatic symptoms
- Cognitive: challenge catastrophic predictions about school
- Reward: brave behaviors token economy

**Family intervention, addressing parental accommodation:**

- Mother's GAD: her anxiety about Ananya → models anxiety AND increases accommodation
- Skills: calm, brief goodbye routine (30 seconds max, then leave confidently)
- Do NOT allow Ananya to stay home; do NOT call school multiple times to check
- Father or other trusted adult may be better for morning routine if mother too anxious
- Mother may need her own treatment (CBT for GAD, or at minimum, psychoeducation on accommodation)

**Pharmacotherapy:**

- If 8–12 weeks of CBT insufficient: Sertraline 25mg starting dose, titrate to 50–100mg
- CAMS trial evidence: combination sertraline + CBT superior for child anxiety

> **EXAM PEARL**
> Parental accommodation is the key maintenance factor in pediatric anxiety disorders. In this case, mother's own GAD amplifies the problem, she is sympathetic to Ananya's somatic complaints because she experiences similar anxiety herself. Addressing mother's own mental health is part of the treatment plan.

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# VIGNETTE 10: Attachment Disorder: DSED

## Case

Meera, 5 years 6 months, was adopted from an orphanage at age 3 years 2 months, where she had lived since 2 weeks of age. Her adoptive parents, Mr. and Mrs. Krishnamurthy, describe her as "warm and affectionate with everyone." At the park, she runs up to strangers and tries to sit on their laps. She walks away with unfamiliar adults without looking back. She has gone missing twice at malls, both times found with strangers who were "just chatting to her." She calls multiple women "Mummy." Her parents describe a warm, committed household with consistent routines since adoption. Two years later, her behavior with strangers has not improved despite their best efforts. At home, she is affectionate and loving with the family.

## Questions

**Q1: Diagnose and differentiate from RAD and ADHD.**

**Diagnosis:** Disinhibited Social Engagement Disorder (DSED), DSM-5: 313.89

**Criteria met:**

- Reduced reticence with unfamiliar adults (runs up to strangers, sits on laps)
- Overly familiar behavior (calls multiple women "Mummy")
- Does not check back with caregiver (walks away without looking back)
- Willingness to go with unfamiliar adults (gone missing twice with strangers)
- History: institutional rearing from 2 weeks to age 3 (extreme social deprivation, required criterion)

**DSED vs RAD:**

| FEATURE | THIS CASE | RAD |
|---|---|---|
| **Core behavior** | Disinhibited, approaches strangers | Inhibited, withdrawn from caregivers |
| **Response to stable caregiving** | PERSISTS despite 2 years in good home | Typically improves |
| **Safety risk** | Exploitation by strangers | Emotional damage from neglect |

**DSED vs ADHD:**

- ADHD: impulsive, inattentive, but the social engagement is not indiscriminate toward all strangers in a relationship-seeking way
- DSED: specifically seeks relationships indiscriminately; not just impulsivity
- DSED can co-occur with ADHD, both diagnoses may be present

- Key: DSED is NOT limited to impulsivity; includes reduced stranger anxiety (which is developmentally expected to be present at age 5+)

**Q2: Why has the behavior not improved despite good caregiving?**

DSED, unlike RAD, can **persist even after stable, loving caregiving placement**. Research on adopted/institutional children shows:

- RAD typically shows significant improvement with stable placement
- DSED shows less reliable improvement and may persist for years
- Neurobiologically: DSED may reflect early disruption of normal stranger anxiety development at a critical period (6–12 months) that is difficult to fully reverse
- Children with DSED do form genuine attachment to adoptive parents, but the indiscriminate social engagement persists as a separate dimension

**Q3: What are the management priorities?**

**1. Parental psychoeducation and support:**

- Explain persistence is NOT their failure, they are doing everything right
- DSED is a consequence of early institutional deprivation, not current parenting
- Validate their love and commitment; reduce guilt and blame
- Prepare them: this may persist into adolescence/adulthood in attenuated form

**2. Safety planning (IMMEDIATE PRIORITY):**

- Teach Meera personal safety rules: "safe adults" (family + school staff only); "private information"; "asking Mummy before going with anyone"
- Close supervision in public, hand-holding, wrist straps if needed
- School: inform teachers about DSED; supervision during lunch/outdoor play
- Community alert for parents to supervise proactively

**3. Dyadic therapy:**

- Theraplay: structured play-based therapy to deepen specific attachment to parents; focuses on attunement, nurture, engagement
- PACE model (Hughes): therapist models Playfulness, Acceptance, Curiosity, Empathy for parents
- Goal: strengthen the discriminated attachment to parents while not punishing general sociability

**4. Do NOT use:**

- Holding therapy (absolutely contraindicated, associated with deaths; no evidence)
- Forced attachment techniques
- Punishment for social engagement (increases shame; does not change underlying drive)

> **CLINICAL ANCHOR**
> DSED is not about the child being "too friendly", it is about the ABSENCE of normal stranger anxiety that should have developed at 6–18 months during the critical period when Meera was institutionalized. She never learned to discriminate between familiar and unfamiliar people. The safety risk is real, these children are genuinely vulnerable to exploitation.

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## VIGNETTE 11: Enuresis with Secondary Onset

### Case

Dhruv, 7 years old, was completely dry at night by age 4 and had been consistently dry for 2 years. Three months ago, he began wetting his bed 4–5 nights per week. His mother reports no urinary symptoms during the day. Around the same time, his parents separated after a period of significant marital conflict. He started at a new school last month. His younger sister was born 4 months ago. Physical examination is unremarkable. Urinalysis and urine culture are normal.

### Questions

**Q1: Classify this presentation and discuss its significance.**

**Diagnosis:** Enuresis, Nocturnal Only, Secondary Type (DSM-5: 307.6)

**Secondary enuresis** (onset after ≥6 months of established continence), Dhruv was dry for 2 years.

**Significance of secondary type:**

- More rigorous investigation warranted (organic causes: UTI ruled out here, diabetes mellitus/insipidus, constipation, urological, normal urinalysis supports non-organic)
- **Psychosocial precipitants highly relevant:**
- Parental separation (major stressor)
- New school (additional stressor)
- New sibling (loss of exclusive attention)
- Multiple concurrent life changes within 4 months

**Q2: What is the treatment hierarchy for this child?**

**Step 1, Address psychosocial stressors:**

- Parental counseling: both parents maintain consistent, warm relationship with Dhruv
- Minimize Dhruv's exposure to parental conflict
- Ensure he receives adequate one-on-one time with each parent
- Acknowledge transition to new school; school-based support if needed

**Step 2, Psychoeducation:**

- Reassure Dhruv: bedwetting is not his fault; many children have it; it will improve
- Use matter-of-fact, non-punitive approach
- Involve Dhruv in management (motivational approach)

**Step 3, Behavioral strategies:**

- Fluid management: adequate fluids during day; reduce in last 2 hours before bed
- Scheduled toileting before bed
- Reward system for dry nights (calendar with stars, not punishment for wet nights)
- Lifting: parents wake child to toilet before their own bedtime (partial solution)

**Step 4, Urine alarm (bell-and-pad):**

- If behavioral measures insufficient after 4–6 weeks
- First-line evidence-based treatment
- 75–85% success rate
- Best long-term outcomes
- Requires 8–12 weeks, family motivation

**Step 5, Desmopressin:**

- Useful for short-term (sleepovers, camps) or if rapid response needed
- 0.2mg oral tablet at bedtime
- Restrict fluid 1 hour before and 8 hours after
- Watch for hyponatremia

> EXAM PEARL
> Secondary enuresis after a clear precipitant (parental separation, new sibling, school change) does NOT necessarily mean organic cause, psychosocial stressors are common precipitants. However, organic causes (UTI, diabetes) MUST be ruled out first. In this case, normal urinalysis already done, proceed with psychosocial and behavioral management.

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## VIGNETTE 12: Intellectual Disability: Down Syndrome, Adult Onset Behavioral Change

### Case

Ranjit, 42 years old, has a lifelong diagnosis of mild intellectual disability secondary to Down syndrome (trisomy 21), confirmed by karyotype. He has been functioning independently in a supported living facility, working in a sheltered workshop, and was described by carers as "cheerful and sociable." Over the past 14 months, carers have noticed gradual memory decline, he forgets his daily routines, gets lost going to the workshop (a familiar route for 10 years), no longer recognizes some long-term coworkers, and has

periods of apparent confusion, especially in the evenings. He has become withdrawn and irritable. He was recently found wandering in the facility at 3am. His gait has become shuffling. He had a generalized tonic-clonic seizure last week.

## Questions

**Q1: What is the most likely explanation for this change in behavior and function?**

**Most likely diagnosis:** Alzheimer's dementia in Down syndrome (trisomy 21)

**Rationale:**

- Age 42: individuals with Down syndrome have virtually 100% Alzheimer's neuropathology (amyloid plaques, neurofibrillary tangles) by age 40 due to triplication of chromosome 21 which carries the APP (Amyloid Precursor Protein) gene
- Clinical Alzheimer's dementia occurs in ~50% by age 60, median onset in mid-50s (earlier than general population)
- Features consistent with Alzheimer's: progressive episodic memory loss (forgetting routines, getting lost), disorientation (wandering at night), personality change (withdrawal, irritability), parkinsonian features (shuffling gait), new-onset seizures (late Alzheimer's feature)
- Sundowning (confusion in evenings)

**Q2: What investigations would you order?**

| INVESTIGATION · RATIONALE |
| --- |
| **Baseline cognitive assessment (Cambridge Cognitive Examination for Older Adults with Down Syndrome, CAMCOG-DS)** Establish current cognitive baseline; compare to previous (if available) |
| **Brain MRI** Cortical atrophy (hippocampal, parietal, frontal); rule out vascular dementia, space-occupying lesion |
| **EEG** Seizure characterization; Alzheimer's EEG changes |
| **Thyroid function** Hypothyroidism (10x more common in DS; worsens cognitive function) |
| **Full blood count, metabolic panel** Exclude treatable causes |
| **Vitamin B12, folate** Nutritional causes of cognitive decline |
| **Review medications** Drug-induced cognitive change |

**Q3: What management principles apply?**

1. **Confirm and communicate diagnosis** to carers and family in accessible language

2. **Safety:** supervision for wandering (door alarms, GPS tracker); seizure precautions; supervision for all activities
3. **Environmental modification:** familiar, predictable environment; visual schedules; reduced sensory overload; good lighting (reduces sundowner confusion)
4. **Pharmacotherapy:**
5. Donepezil (cholinesterase inhibitor): some evidence for mild-moderate Alzheimer's in DS; start low, go slow
6. Seizure management: sodium valproate or lamotrigine (avoid phenytoin, cognitive side effects)
7. Avoid benzodiazepines (worsen cognition)
8. **Carer support:** training in dementia care; family meetings; advance care planning
9. **Palliative approach** as disease progresses: comfort, dignity, quality of life

> **EXAM PEARL**
>
> Down syndrome + Alzheimer's dementia is a key association examined both in child psychiatry (genetics/ID section) and in old age psychiatry. The mechanism is direct: trisomy 21 → three copies of APP gene → excess amyloid precursor protein → early and universal amyloid accumulation. Every person with Down syndrome has Alzheimer's pathology by age 40; clinical dementia depends on reserve, other factors.

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| *SOURCES: KAPLAN & SADOCK (11TH ED.) | RUTTER'S (6TH ED.) | LEWIS'S (5TH ED.) | DSM-5-TR | ICD-11* |
|---|---|---|---|---|

*All patient names and details are entirely fictitious.*

GUIDE 13 · PART III

# Forensic Law

*Paper III · Specialties, Forensic & Child. Six study modes, from notes to quick review.*

CHAPTER 01 · FORENSIC LAW

# Study Notes

**Sources:** Kaplan & Sadock's Synopsis of Psychiatry (12th ed.), Uday Kumar's Forensic Psychiatry, MHCA 2017 (Act No. 10 of 2017), Bharatiya Nyaya Sanhita (BNS) 2023, RPwD Act 2016, NDPS Act 1985

## SECTION 1: MENTAL HEALTHCARE ACT 2017 (MHCA 2017)

### 1.1 Overview and Legislative Context

The Mental Healthcare Act 2017 replaced the Mental Health Act 1987. It came into force on **29 May 2018** and represents a paradigm shift from custodial to rights-based mental health care.

**Key philosophy:** Persons with mental illness are rights-holders, not objects of charity or medical control.

**Constitutional basis:** Article 21 (Right to Life with Dignity), Article 14 (Right to Equality), Article 47 (Duty of State to improve public health).

**International alignment:** UN Convention on the Rights of Persons with Disabilities (UN CRPD, 2006), India ratified in 2007.

> EXAM PEARL
> MHCA 2017 received Presidential assent on **7 April 2017** but came into force **29 May 2018**. The 1987 Act was repealed on this date.

### 1.2 Key Definitions (Section 2)

TERM · DEFINITION

**Mental illness** Substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgement, behaviour, capacity to recognise reality, or ability to meet ordinary demands of life

**Mental healthcare** Analysis and diagnosis of mental condition; treatment; care; rehabilitation of person with mental illness

**Nominated representative** Person appointed by person with mental illness or by designated authority to be their representative for purposes of this Act

**Mental Health Establishment (MHE)** Any health establishment (government or private) providing mental healthcare services

**Supported admission** Admission of person with mental illness in a MHE without their consent, based on support from nominated representative and assessment by two psychiatrists

**Independent admission** Voluntary admission by person with sufficient capacity to make autonomous decision

> EXAM PEARL
> "Mental illness" under MHCA 2017 specifically EXCLUDES mental retardation (now intellectual disability), it must be covered under RPwD Act 2016.

### 1.3 Rights of Persons with Mental Illness (Chapter V, Sections 18–28)

These are the most exam-heavy sections:

| RIGHT | SECTION | KEY CONTENT |
|---|---|---|
| **Right to access mental healthcare** | 18 | Government must provide affordable, accessible, good quality MH services |
| **Right to community living** | 19 | Right to live in, be part of, and not be segregated from society |
| **Right to protection from cruel treatment** | 20 | No physical restraints except in specified circumstances; no seclusion; no chaining |
| **Right to equality and non-discrimination** | 21 | No discrimination in provision of MH services based on gender, sex, religion, etc. |
| **Right to information** | 22 | Right to information about diagnosis, treatment, side effects, alternatives |
| **Right to confidentiality** | 23 | All information about admission/treatment is confidential |
| **Right to access medical records** | 24 | Right to inspect/receive copy of records |
| **Right to personal correspondence** | 25 | Right to communicate with legal representative, nominated representative, family |
| **Right to legal aid** | 26 | Right to legal representation at MHRB hearings |
| **Right to make complaints** | 28 | Right to make complaints to Medical Officer in Charge / MHRB |

> **EXAM PEARL**
> Section 20, Prohibition of chaining: "No person with mental illness shall be chained in any manner or form." This is an absolute prohibition, with no exceptions.

> **EXAM PEARL**
> Section 21, Insurance parity: Persons with mental illness must receive the same medical insurance benefits as those with physical illness. This was a landmark inclusion.

### 1.4 Advance Directives (Sections 5–14)

**Section 5:** A person with mental illness (with capacity) may make an advance directive stating:

- How they wish to be cared for during a mental health crisis
- How they do NOT wish to be cared for

**Making an advance directive:**

- Must be in writing
- Signed/thumb-printed by person in presence of two witnesses
- Registered with the competent authority (Notary Public / Gazetted Officer)
- Copy given to nominated representative and treating psychiatrist

**Nominated Representative (NR) [Sections 13–14]:**

- Person designated by person with mental illness to be their representative
- If no NR appointed: spouse/partner → parent → sibling → other relative (hierarchy)
- If no family: any person appointed by MHRB
- NR rights: consent to admission and treatment on behalf of person when incapacitated

**Challenges to advance directives:**

- Mental health professional may challenge if they believe it would cause serious harm or is impractical
- Must inform MHRB if they do not follow the directive

> **EXAM STRATEGY**
> If asked about advance directives, always mention: who can make them, process of making, role of nominated representative, and circumstances under which they can be overridden.

### 1.5 Mental Health Review Board (MHRB): Sections 73–98

**Composition:**

- District-level body

- Chairperson: District Judge or Judicial Magistrate
- Two members: one psychiatrist, one person with lived experience of mental illness OR family member

**Functions:**

- Review admission of all persons admitted under supported/emergency provisions
- Register advance directives
- Adjudicate on complaints
- Authorize long-term care beyond specified periods
- Protect rights of persons with mental illness

**Review timelines:**

- Supported admission: within 7 days of receipt of application by MHRB
- Every 30 days thereafter if admission continues
- Independent admission review: if person requests or family disputes

> **EXAM PEARL**
> MHRB must include "a person who has or has had mental illness or a relative of such a person", this is a key departure from the old MHA 1987.

## 1.6 Admission Procedures

### A. INDEPENDENT ADMISSION (SECTION 86)

- Person with mental illness has capacity and voluntarily seeks admission
- MHE must accept if a bed is available
- Person may leave after giving notice (at least 24 hours, not more than 3 days)
- No review by MHRB required for routine independent admission

### B. SUPPORTED ADMISSION (SECTIONS 87–89)

**Who can apply:** Nominated representative OR any relative/caregiver

**Process:**

1. Application made to Medical Officer in Charge (MOIC) of MHE
2. Two independent mental health professionals (at least one must be a psychiatrist) assess the person
3. Both must certify:
4. Person has mental illness
5. Person does not have capacity to make mental healthcare decisions
6. Admission is necessary for care or treatment
7. MOIC reviews the two certificates and admits if criteria met

8. MHRB informed within 3 days
9. MHRB reviews within 7 days

**Duration:**

- Initial period: up to 30 days
- Extensions: granted by MHRB (30 days each)
- Total up to 180 days without High Court review
- Beyond 180 days: High Court order required

#### C. EMERGENCY ADMISSION (SECTIONS 94–95)

- Person with mental illness is at imminent risk of harm to self or others
- Police officer, Magistrate, or relative can bring person
- Emergency treatment allowed for 72 hours without full assessment
- Within 72 hours: must get second psychiatric opinion and process as supported admission or discharge

> **EXAM PEARL**
> Emergency admission does NOT require MHRB approval in advance. But MHRB must be notified after admission.

### 1.7 Section 115: Decriminalization of Attempted Suicide

**Full text of Section 115(1):** "Notwithstanding anything contained in section 309 of the Indian Penal Code, any person who attempts to commit suicide shall be presumed, unless proved otherwise, to have severe stress and shall not be tried and punished under the said Code."

**Section 115(2):** Government shall have duty to provide care, treatment, and rehabilitation to the person to reduce risk of recurrence.

> **EXAM PEARL**
> This does NOT fully repeal Section 309 IPC (now Section 226 BNS). It creates a presumption of severe stress. The burden shifts, the person is presumed to have mental illness/severe stress unless proven otherwise. This is a public health approach to suicide.

> **EXAM STRATEGY**
> In long answers on MHCA 2017, always mention Section 115 separately, it is a landmark provision and shows the Act's intent to destigmatize mental illness.

### 1.8 Insurance Parity (Section 21(4))

"Every insurer shall make provisions for medical insurance for treatment of mental illness on the same basis as is available for treatment of physical illness."

This was the first legal mandate for mental health insurance parity in India. Still imperfectly implemented in practice.

### 1.9 Central Mental Health Authority (CMHA) and State Mental Health Authority (SMHA)

**CMHA (Chapter IX, Sections 33–45):**

- Set up by Central Government
- Chairperson: Secretary, Ministry of Health and Family Welfare
- Functions: Register central MHEs, develop standards, train professionals, maintain register of mental health professionals, advise government on policy

**SMHA (Chapter X, Sections 45–65):**

- Set up by each State Government
- Chairperson: Chief Secretary or Principal Secretary (Health)
- Functions: Register state MHEs, inspect, audit, ensure compliance with Act, receive complaints, supervise quality

> EXAM PEARL
> Registration of Mental Health Establishments is MANDATORY under MHCA 2017. No MHE can function without registration. This was a major change from MHA 1987.

### 1.10 Prohibition on Treatments (Section 97)

The following are prohibited without specific safeguards:

- **Sterilization** as a treatment for mental illness
- **Psychosurgery** without free and informed consent of patient and approval of MHRB
- **Electroconvulsive therapy (ECT)** without anaesthesia or muscle relaxant (i.e., modified ECT is mandatory)
- **Unmodified ECT** is prohibited
- ECT in minors: prohibited entirely in MHCA (corrected to "only with MHRB approval", note: strict interpretation)

> EXAM PEARL
> Unmodified ECT is explicitly PROHIBITED under MHCA 2017. Only modified ECT (with anaesthesia + muscle relaxant) is permitted. ECT in children/adolescents requires MHRB approval.

## SECTION 2: RIGHTS OF PERSONS WITH DISABILITIES ACT 2016 (RPwD Act)

### 2.1 Overview

- Replaced the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995
- Aligns with UN CRPD
- Came into force: **19 April 2017**
- Administered by: Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment

### 2.2 Definition of Disability (Section 2(s))

**21 specified disabilities** (Schedule of the Act):

**Physical Disabilities:**

1. Locomotor disability
2. Leprosy cured person
3. Cerebral palsy
4. Dwarfism
5. Muscular dystrophy
6. Acid attack victim

**Sensory Disabilities:**

1. Blindness
2. Low vision
3. Deaf
4. Hard of hearing
5. Speech and language disability

**Intellectual/Developmental Disabilities:**

1. Intellectual disability (previously mental retardation)
2. Specific learning disabilities
3. Autism spectrum disorder (ASD)

**Mental and Neurological:**

1. Mental illness (covered by RPwD, excluded from MHCA definition, but both Acts apply)
2. Chronic neurological conditions (including MS, Parkinson's disease)

**Blood Disorders:**

1. Haemophilia
2. Thalassemia
3. Sickle cell disease

**Multiple/Others:**

1. Multiple disabilities including deafblindness
2. Any other category notified

> **EXAM PEARL**
> The older PDA 1995 had only 7 disabilities. RPwD 2016 expanded to 21. Also introduces "benchmark disability", 40% or more disability, which is the threshold for most benefits.

> **EXAM PEARL**
> "Mental illness" in RPwD Act = same definition as MHCA 2017 but INCLUDES intellectual disability as a SEPARATE category (disability #12).

## 2.3 Rights under RPwD Act

| RIGHT | SECTION | CONTENT |
|---|---|---|
| **Right to equality and non-discrimination** | Chapter II | Cannot be discriminated against in education, employment, access to justice |
| **Right to education** | 16–17 | Inclusive education in government-funded schools |
| **Right to employment** | 33–34 | Reservation in government jobs: 4% (up from 3% under 1995 Act) |
| **Right to social security** | 24 | Insurance schemes, scholarships, poverty alleviation |
| **Right to accessibility** | 40–46 | Physical access, access to information, access to services |

## 2.4 Reservation Provisions

**Government employment:**

- Locomotor, visual, hearing disability: 1% each
- Intellectual disability + mental illness (combined): 1%
- **Total: 4%** (benchmark disability, i.e., ≥40%)

**Higher education (government institutions):** 5% reservation

EXAM PEARL

Total reservation increased from 3% (1995 Act) to 4% (2016 Act) in government jobs.

## 2.5 Unique Disability ID (UDID) Card

- National web portal for issuance of UDID cards
- Person assessed by Medical Board at District Hospital
- Disability certificate issued grading severity
- UDID card is a smart card with biometric data, disability certificate embedded
- **Benchmark disability (≥40%):** Eligible for reservation, benefits
- **Below 40%:** Some benefits but not reservation

## 2.6 Certification Process

1. Person applies at District Hospital (Civil Surgeon or Medical Superintendent)
2. Medical Board assessment, multi-disciplinary (physician + specialist relevant to disability)
3. Disability Certificate issued specifying type and percentage
4. UDID card generated
5. Card valid until disability type/extent changes significantly

## 2.7 Guardianship under RPwD Act

**Limited Guardianship (Section 14):**

- RPwD 2016 introduces concept of "limited guardianship", replaces plenary (full) guardianship
- Person retains legal capacity in all other areas
- Guardian appointed by District Magistrate for specific decisions only
- Must be reviewed periodically
- Person with disability must consent to or support the arrangement

EXAM PEARL

RPwD 2016 moves away from plenary guardianship toward SUPPORTED DECISION-MAKING. This aligns with UN CRPD Article 12 (Equal recognition before the law).

CLINICAL ANCHOR

In clinical practice, when a patient with schizophrenia and intellectual disability needs a guardian for financial decisions, RPwD 2016 governs. MHCA governs admission/treatment decisions.

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# SECTION 3: NDPS ACT 1985 (NARCOTIC DRUGS AND PSYCHOTROPIC SUBSTANCES ACT)

## 3.1 Overview

- Enacted 1985, significantly amended 2001, 2014
- Replaces earlier Dangerous Drugs Act 1930 and Opium Acts
- Administering ministry: Ministry of Finance (Department of Revenue) + Ministry of Health (for treatment provisions)

## 3.2 Schedules

SCHEDULE · CONTENT

**Schedule I** Narcotic drugs (highest control), e.g., heroin, morphine, cannabis, cocaine

**Schedule II** Psychotropic substances, e.g., amphetamines, barbiturates, benzodiazepines

**Schedule III** Preparations exempt from certain controls

> EXAM PEARL
> Cannabis (ganja, charas, bhang) is Schedule I but BHANG is partially exempt in certain states, state governments can permit bhang use. This is a classic exam distinction.

## 3.3 Key Offenses and Penalties

| OFFENSE | SMALL QUANTITY | COMMERCIAL QUANTITY |
|---|---|---|
| **Production/manufacture** | Rigorous imprisonment up to 6 months + fine | 10–20 years + fine ≥ Rs. 1 lakh |
| **Possession** | Rigorous imprisonment up to 1 year + fine | 10–20 years + fine ≥ Rs. 1 lakh |
| **Sale/purchase** | Up to 1 year + fine | 10–20 years + fine |
| **Financing drug trafficking** | | 10–20 years + fine |
| **Repeat offense (commercial)** | | Death penalty (Section 31A) |

> EXAM PEARL
> "Small quantity" vs "commercial quantity" is determined by Central Government notification. Quantities are substance-specific. For heroin: small = 5g, commercial = 250g.

## 3.4 Treatment Provisions (Section 64A)

**Section 64A (Immunity to addicts who seek treatment):**

- A person who is addicted to a drug and voluntarily submits to treatment at a government-recognized center is immune from prosecution for personal use/possession
- This is the key "treatment over punishment" provision
- Applicable only for personal use/possession, not for trafficking

> **EXAM PEARL**
> Section 64A is the "de-addiction immunity" clause. Addicts who voluntarily seek treatment CANNOT be prosecuted for their drug use. This is critical for MET-AI type programs, it creates legal space for treatment.

### 3.5 Treatment Framework

- National Policy on Narcotic Drugs and Psychotropic Substances
- Government recognition of de-addiction centers required
- Opioid Substitution Therapy (OST) legally permitted under NDPS Act (buprenorphine/methadone programs)
- OST centers must be registered

### 3.6 2014 Amendments

Key changes:

- Expanded definition of "essential narcotic drugs" for medical use
- Simplified procedures for obtaining narcotic drugs for palliative care
- Addressed over-regulation that was hampering legitimate medical use of opioids (especially in cancer pain)

> **EXAM STRATEGY**
> NDPS Act questions often focus on: (1) Schedule I vs II, (2) small vs commercial quantity, (3) Section 64A immunity, (4) death penalty provision (Section 31A), (5) 2014 amendment for palliative care.

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## SECTION 4: CRIMINAL RESPONSIBILITY: IPC SECTION 84 / BNS SECTION 22

### 4.1 Historical Background

**McNaughton Case (1843, England):**

Daniel McNaughton shot Edward Drummond (private secretary to PM Robert Peel) believing he was Peel. Found not guilty by reason of insanity. House of Lords then formulated the **McNaughton Rules**.

> **EXAM PEARL**
> The case is spelled "McNaughton" (or M'Naghten). He had persecutory delusions. He was NOT executed, he was detained in Broadmoor Hospital.

### 4.2 McNaughton Rules (1843)

To establish a defense on the ground of insanity, the accused must show that:

1. At the time of committing the act, the accused was labouring under such a defect of reason
2. From disease of the mind
3. As not to know the nature and quality of the act
4. OR if he knew the nature of the act, he did not know that what he was doing was wrong (legally wrong)

**Key components:**

- "Disease of the mind", legal term, not strictly medical
- "Did not know the nature and quality of the act", cognitive impairment
- "Did not know it was wrong", moral/legal cognition

> **EXAM PEARL**
> McNaughton test is PURELY COGNITIVE. It does not account for: (1) inability to control behavior despite knowing it's wrong (irresistible impulse); (2) diminished but not absent responsibility.

### 4.3 Section 84 IPC (Now Section 22, BNS 2023)

**Section 84 IPC text:** "Nothing is an offence which is done by a person who, at the time of doing it, by reason of unsoundness of mind, is incapable of knowing the nature of the act, or that he is doing what is either wrong or contrary to law."

**Section 22 BNS 2023:** Identical wording, preserved in new code.

**Key elements:**

- "Unsoundness of mind", not defined; broader than "mental illness"
- "At the time of doing", crucial temporal requirement
- "Incapable of knowing", complete incapacity, not partial
- OR knowing the nature but not knowing it is wrong/contrary to law

> **EXAM PEARL**
> Section 84/BNS 22 is more liberal than McNaughton in that it uses "unsoundness of mind" rather than "disease of the mind." It includes: psychosis, severe intellectual disability, dementia, epileptic automatism, intoxication (if non-self-induced).

**What it does NOT cover:**

- Person knew the act was wrong but couldn't control themselves (irresistible impulse, not recognized in India)
- Person had partial impairment but could still understand wrongness
- Voluntary intoxication

## 4.4 Elements of a Crime: Mens Rea and Actus Reus

| ELEMENT | DEFINITION | RELEVANCE TO INSANITY |
|---|---|---|
| **Actus reus** | Guilty act, the physical act of committing the crime | Must be proven, insanity doesn't negate the act itself |
| **Mens rea** | Guilty mind, criminal intent | Section 84/BNS 22 defense negates mens rea |
| **Concurrence** | Actus reus and mens rea must occur together | |

**Types of mens rea:**

- Intention (most serious)
- Knowledge
- Recklessness
- Negligence (least)

> **EXAM PEARL**
> The insanity defense under Section 84/BNS 22 operates by negating MENS REA. The accused performed the act (actus reus present) but lacked the guilty mind (mens rea absent) due to unsoundness of mind.

## 4.5 Irresistible Impulse Rule

**Not recognized in Indian law.**

**Definition:** Even if the person knew the act was wrong, if they were unable to control their behavior due to mental illness (e.g., command hallucinations), they should not be held responsible.

**Historical use:** Some US states, some UK courts (Hadfield case, 1800)

**Why not in India:** Difficult to prove; risk of expanding defense excessively; McNaughton + Section 84 already covers most cases

### 4.6 Durham Rule (1954, USA)

**"Product test":** An accused is not criminally responsible if their unlawful act was the product of mental disease or defect.

**Problems:** Too broad; almost any behavior in mentally ill could qualify; abandoned in US courts by 1970s.

**Not applicable in India.**

### 4.7 Diminished Responsibility

**UK concept (Homicide Act 1957, UK):**

- Partial defense to murder
- Reduces murder to manslaughter
- Requires "abnormality of mental functioning" that substantially impaired:
- Understanding the nature of the conduct
- Forming rational judgment
- Exercising self-control

**India:** Section 84/BNS 22 is an all-or-nothing defense. India does NOT have a formal diminished responsibility doctrine.

However, in sentencing, courts can consider mental illness as a mitigating factor.

> EXAM PEARL
> India has no "diminished responsibility", it's binary: either sane (full responsibility) or insane under Section 84/BNS 22 (no responsibility). Mental illness may mitigate sentencing but does not reduce the charge.

### 4.8 Automatism

**Definition:** Unconscious, involuntary action, the person performs an act without conscious awareness or control.

**Types:**

- **Sane automatism:** Due to external cause (e.g., hypoglycemia, blow to head), complete defense
- **Insane automatism:** Due to internal disease of mind (e.g., epileptic automatism, dissociative state), leads to verdict of "not guilty by reason of insanity"

**Psychiatric relevance:** Complex partial seizures (temporal lobe epilepsy), sleepwalking, severe dissociation

### 4.9 Intoxication and Criminal Liability

TYPE · LEGAL EFFECT

**Voluntary intoxication** Generally NOT a defense; person is responsible

**Involuntary intoxication (drugged without knowledge)** Complete defense, equated with insanity

**Voluntary intoxication + specific intent crime** May negate specific intent (e.g., first-degree murder) but not general intent

> EXAM PEARL
> Section 85 IPC (now BNS 23): Involuntary intoxication IS a defense. Section 86 IPC (now BNS 24): Voluntary intoxication, if specific intent required, and intoxication precluded formation of intent, may be partial defense.

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## SECTION 5: CRIMINAL RESPONSIBILITY: FITNESS TO STAND TRIAL

### 5.1 Definition

**Fitness to stand trial (competency to stand trial):** The ability of an accused person to understand the nature of proceedings and to assist in their own defense at the time of the trial.

Note: Distinct from insanity at the time of the act (retrospective assessment), fitness is assessed in the PRESENT.

### 5.2 Legal Basis in India

**Section 328 CrPC (now Section 368 BNSS):** If accused appears to be insane and incapable of making defense, Magistrate inquires into the fact and sends the person for psychiatric assessment.

**Section 329 CrPC (now Section 369 BNSS):** If person found incapable of making their defense:

- Trial is postponed
- Person detained in safe custody (usually a psychiatric hospital)
- Reviewed periodically

### 5.3 Criteria for Fitness to Stand Trial

MacArthur Competence Assessment Tool (MacCAT-CA) framework, adapted for Indian use:

**Must be able to:**

1. Understand the charges against them
2. Understand the legal process (roles of judge, lawyer, prosecution)
3. Understand potential consequences (including punishment)
4. Communicate meaningfully with their lawyer
5. Follow court proceedings
6. Assist in their own defense

> **EXAM PEARL**
> Fitness to stand trial is a LEGAL determination, not a psychiatric one. The psychiatrist provides an opinion; the judge decides. The question is about current functional capacity, not diagnosis.

### 5.4 Psychiatric Assessment of Fitness

**Clinical domains to assess:**

- Cognitive function (orientation, attention, memory)
- Understanding of the charges and their implications
- Ability to recount relevant facts
- Ability to instruct counsel
- Psychotic symptoms that interfere with trial participation
- Presence of active delusions related to the case

**Instruments:** MacCAT-CA, Fitness Interview Test-Revised (FIT-R), Georgia Court Competency Test

### 5.5 Management of Unfit Accused

1. If psychiatric treatment can restore fitness: treat and re-evaluate
2. If fitness cannot be restored (permanent incapacity):
3. Court can order indefinite detention in psychiatric facility
4. Section 330 CrPC (BNSS 370): After inquiry, person may be sent to psychiatric hospital in "safe custody"
5. If offense was minor and person is unlikely to recover: Magistrate may discharge

> **EXAM PEARL**
> An unfit accused can be detained longer than if they had been convicted and sentenced. This is an ethical concern raised frequently in forensic psychiatry literature.

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# SECTION 6: CIVIL CAPACITY

## 6.1 Testamentary Capacity

**Definition:** The mental capacity required to make a valid will.

**Legal standard (Banks v Goodfellow, 1870, UK, applied in India):**

1. The person must know the **nature of making a will** and its effects
2. The person must know the **extent of their property** (does not need to know exact amounts)
3. The person must know the **natural claims** on their bounty (knows who would naturally inherit)
4. The person must NOT have a **disorder of the mind** that poisons their affections, perverts their sense of right, or prevents the exercise of their natural faculties in disposing of their property

> EXAM PEARL
> All four elements of Banks v Goodfellow must be satisfied. Even a person with dementia CAN have testamentary capacity if they have a "lucid interval." The key is capacity at the TIME of making the will.

**Psychiatric conditions affecting testamentary capacity:**

- Dementia (impairs all four elements as it progresses)
- Psychosis with delusions targeting family members (element 4)
- Severe depression with nihilistic delusions
- Intellectual disability (depends on severity)

**Testamentary capacity and lucid intervals:**

- Persons with episodic mental illness (including bipolar disorder) may have capacity during lucid intervals
- Will made during a lucid interval is valid

## 6.2 Contractual Capacity

**Section 11 Indian Contract Act 1872:** A person is competent to contract if they are:

- Of the age of majority (18 years)
- Of sound mind at the time of making the contract
- Not disqualified by any law

**Section 12 Indian Contract Act:** "A person is said to be of sound mind for the purpose of making a contract if, at the time when he makes it, he is capable of understanding it and of forming a rational judgment as to its effect upon his interests."

> **EXAM PEARL**
> Section 12 focuses on the SPECIFIC CONTRACT being made, not general mental state. A person with intermittent mental illness CAN enter valid contracts during intervals of capacity.

**Persons with unsound mind:** Contracts voidable at their option (not automatically void), unless they were permanently incapable.

### 6.3 Fitness to Marry

**Section 5 Hindu Marriage Act 1955:**

"A marriage may be solemnized between any two Hindus, if... neither party is incapable of giving a valid consent to it in consequence of unsoundness of mind; or though capable of giving a valid consent, has been suffering from mental disorder of such a kind or to such an extent as to be unfit for marriage and the procreation of children."

**Grounds for voidable marriage (Section 12 HMA):**

- Marriage can be annulled if consent was vitiated by unsoundness of mind

**Psychiatric assessment for fitness to marry:**

- Is the person capable of understanding marriage and its obligations?
- Is the person capable of giving informed consent?
- Does any mental disorder render them unfit for marital life?

> **CLINICAL ANCHOR**
> This is commonly encountered when families seek annulment of marriages involving a person with schizophrenia or severe intellectual disability. The psychiatrist's role is to assess capacity at the time consent was given, not current state.

### 6.4 Consent to Treatment

**Elements of valid informed consent:**

1. **Disclosure:** Adequate information about diagnosis, proposed treatment, alternatives, risks, benefits
2. **Comprehension:** Person must understand the information
3. **Voluntariness:** Free from coercion, undue influence, or duress
4. **Capacity:** Person must have decision-making capacity
5. **Decision:** Must make and communicate a decision

> **EXAM PEARL**
> Capacity is TASK-SPECIFIC. A person may have capacity to consent to a blood test but not to a complex surgery. Assess capacity for each specific decision.

**Capacity vs Competence:**

- **Capacity** = clinical assessment (psychiatrist/physician)
- **Competence** = legal determination (court)

**Assessment of decision-making capacity (MacArthur model):**

1. Ability to UNDERSTAND information
2. Ability to APPRECIATE relevance to their situation
3. Ability to REASON about options
4. Ability to EXPRESS a consistent choice

### 6.5 Capacity in Elderly and Dementia

**Mini-Mental State Examination (MMSE) and capacity:**

- MMSE ≤ 17: High probability of incapacity
- MMSE 18–23: Borderline, formal capacity assessment required
- MMSE ≥ 24: Usually has capacity

BUT: MMSE score alone does NOT determine capacity. Specific functional assessment is required.

**Clinical approach:**

1. Use validated instruments (MacCAT-T, Hopkins Competency Assessment Test)
2. Assess for fluctuating capacity (sundowning)
3. Document in detail
4. Consider decision-specific capacity (financial ≠ medical ≠ testamentary)

> **EXAM PEARL**
> In India, capacity assessment for elderly patients is increasingly relevant in civil cases (property disputes, will contests, nursing home placement). The psychiatrist must document: (1) diagnosis, (2) effect on specific decision-making, (3) capacity at specific time if relevant.

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## SECTION 7: FORENSIC ASSESSMENT

### 7.1 Violence Risk Assessment

**Historical clinical judgment:** Clinician's intuitive assessment

- Subjective, unreliable, poor validity

**Actuarial methods:** Statistically derived risk scores (VRAG, Static-99)

- High predictive validity for group
- Ignores individual clinical factors

**Structured Professional Judgment (SPJ):** Current gold standard

- Uses structured instruments to guide clinical judgment
- HCR-20 V3 (Historical Clinical Risk Management-20)

### HCR-20 VERSION 3 (2013)

**Historical subscale (10 items):**

H1. Violence history

H2. Other antisocial behaviour

H3. Relationships

H4. Employment

H5. Substance use

H6. Major mental disorder

H7. Personality disorder

H8. Traumatic experiences

H9. Violent attitudes

H10. Treatment or supervision response

**Clinical subscale (5 items):**

C1. Insight

C2. Violent ideation or intent

C3. Symptoms of major mental disorder

C4. Instability

C5. Treatment or supervision response

**Risk Management subscale (5 items):**

R1. Professional services and plans

R2. Living situation

R3. Personal support

R4. Treatment or supervision response

R5. Stress or coping

**Output:** Low / Moderate / High risk + case formulation (not just a score)

> **EXAM PEARL**
>
> HCR-20 is structured professional judgment, NOT purely actuarial. It produces a risk formulation, not just a number. Each item rated 0/1/2. Total ≤ 20 possible from static (H) items, ≤ 10 from C, ≤ 10 from R.

## 7.2 Sexual Offender Assessment

**Risk tools:**

- Static-99R: Actuarial, historical factors only (age, prior offenses, victim characteristics)
- RSVP (Risk for Sexual Violence Protocol): SPJ instrument
- SVR-20 (Sexual Violence Risk-20)

**Clinical assessment includes:**

- Sexual interest/arousal patterns (phallometry, Abel Assessment)
- Offense precursors and pathways
- Cognitive distortions about victims and offending
- Empathy deficits
- Treatment motivation

**Paraphilias relevant in forensic context:**

- Pedophilic disorder (most common in child sexual offense cases)
- Exhibitionistic disorder
- Voyeuristic disorder
- Frotteuristic disorder

## 7.3 Malingering

**Definition:** Intentional production or exaggeration of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives.

**External incentives:** Avoid punishment, obtain financial compensation, evade military service, obtain drugs.

**Distinguished from:**

- Factitious disorder: Intentional production but motivated by sick role, not external gain
- Conversion disorder (Functional Neurological Symptom Disorder): Unconscious, not intentional

### DETECTION OF MALINGERING

**Clinical red flags:**

- Symptoms inconsistent with known psychiatric disorders
- Symptoms worsen only when being observed

- Discrepancy between reported impairment and observed functioning
- Unusually severe symptoms without corroborating history
- Failure to cooperate with assessment
- History of prior malingering

**Psychological tests for malingering:**

| TEST | FULL NAME | WHAT IT DETECTS |
|---|---|---|
| **TOMM** | Test of Memory Malingering | Effort-related memory impairment |
| **SIRS** | Structured Interview of Reported Symptoms | Feigned psychiatric symptoms |
| **SIRS-2** | Updated version | More specific |
| **M-FAST** | Miller Forensic Assessment of Symptoms Test | Quick screen for feigned symptoms |
| **VSVT** | Victoria Symptom Validity Test | Cognitive malingering |
| **WMT** | Word Memory Test | Memory performance validity |

> **EXAM PEARL**
> TOMM uses a 50-item forced-choice paradigm. Scores below 45/50 on Trial 2 suggest poor effort. A person with genuine amnesia will perform at chance (25/50), not below.

> **EXAM PEARL**
> SIRS/SIRS-2 is the gold standard for detecting feigned psychiatric symptoms (not cognitive). Eight scales: Rare Symptoms, Symptom Combinations, Improbable/Absurd Symptoms, etc.

## 7.4 Dangerousness Assessment

**Static risk factors (do not change):**

- Prior violence history (strongest predictor)
- Young age at first violent act
- Male sex
- History of childhood abuse
- Antisocial personality traits
- Substance use disorder
- Psychopathy (PCL-R score)

**Dynamic risk factors (can change with treatment):**

- Active psychotic symptoms (especially threat/control-override delusions)

- Active substance use
- Non-adherence to medication
- Homelessness/instability
- Current violent ideation or intent
- Anger dysregulation

> **EXAM PEARL**
> Prior violent behavior is the SINGLE BEST predictor of future violence. But mental illness alone is a poor predictor, the combination of mental illness + substance use + non-adherence dramatically increases risk.

**MacArthur Violence Risk Assessment Study findings:**

- Mental illness alone does NOT significantly increase violence risk beyond general population
- Substance use comorbidity does significantly increase risk
- Specific symptom clusters matter (threat/control-override > hallucinations alone)

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# SECTION 8: FORENSIC REPORT WRITING

## 8.1 Types of Forensic Reports

| REPORT TYPE | CONTEXT |
|---|---|
| **Fitness to stand trial** | Criminal court, before trial |
| **Mental state at time of offense (insanity defense)** | Criminal court, at trial |
| **Dangerousness/risk assessment** | Criminal court, sentencing, parole |
| **Testamentary capacity** | Civil court, will dispute |
| **Contractual capacity** | Civil court, contract dispute |
| **Personal injury/disability** | Insurance, civil litigation |
| **Child custody** | Family court |
| **Immigration/asylum** | Immigration court |

## 8.2 Structure of a Forensic Report

**Standard sections:**

1. **Identifying information:** Name of evaluee, date of birth, date of evaluation, referral source

2. **Reason for referral:** Specific legal question(s) to be addressed
3. **Sources of information:** Records reviewed, interviews conducted, tests administered
4. **Relevant history:** Medical, psychiatric, substance use, social, legal history
5. **Mental status examination:** Current MSE findings
6. **Psychological testing results:** If applicable
7. **Formulation:** Integration of findings relevant to the legal question
8. **Opinions:** Direct answers to referral questions with reasoning
9. **Recommendations:** Treatment, disposition, follow-up
10. **Signature:** Name, qualifications, date

> EXAM PEARL
> The OPINION section must directly address the referral question. Vague opinions are useless in court. Write: "It is my opinion, to a reasonable degree of medical/psychiatric certainty, that..."

## 8.3 Role of Expert Witness

**Fact witness:** Testifies only about what they directly observed (e.g., treating clinician describes what the patient said).

**Expert witness:** Provides OPINION based on expertise. Expert witnesses can:

- Testify beyond personal observation
- Provide opinion on ultimate legal questions
- Base opinions on hypotheticals

**Duties of expert witness:**

- Duty is to the COURT, not to the party that retained them
- Must be objective and impartial
- Must disclose limitations and uncertainty
- Must not advocate for client beyond what data supports

> EXAM PEARL
> The expert witness's primary duty is to the court and to the truth, NOT to the party that hired them. This is the fundamental ethical principle of forensic testimony.

## 8.4 Qualifying as an Expert Witness

Indian Evidence Act (Section 45, IEA 1872, now Bharatiya Sakshya Adhiniyam Section 39):

"When the court has to form an opinion upon a point of foreign law, or of science, or of art, or as to identity of handwriting or finger impressions, the opinions upon that point of

persons specially skilled in such foreign law, science or art, or in questions as to identity of handwriting or finger impressions are relevant facts. Such persons are called experts."

A psychiatrist qualifies as an expert on questions of mental illness, capacity, and risk.

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## SECTION 9: CUSTODY AND FAMILY LAW

### 9.1 Child Custody Evaluation

**Legal standard:** Best Interests of the Child (BIC), Guardians and Wards Act 1890, Hindu Minority and Guardianship Act 1956

**Factors considered:**

- Child's age and developmental needs
- Quality of attachment to each parent
- Each parent's mental health, substance use, history of violence
- Child's expressed preference (if old enough)
- Continuity and stability of care
- Each parent's willingness to support the other parent's relationship with the child
- History of domestic violence or abuse

**Psychiatric assessment includes:**

- Individual assessment of each parent
- Assessment of each parent-child relationship
- Psychological testing if indicated
- Review of records (medical, school, legal)

> **EXAM PEARL**
> A parent's mental illness ALONE is not sufficient grounds to deny custody. The question is whether the mental illness impairs PARENTING CAPACITY. A well-stabilized parent with bipolar disorder may have excellent parenting capacity.

### 9.2 Domestic Violence: Protection of Women from Domestic Violence Act 2005 (PWDV Act)

**Definition of domestic violence (Section 3 PWDV Act):**

- Physical abuse
- Sexual abuse
- Verbal and emotional abuse (including insults, threats, humiliation)
- Economic abuse (deprivation of financial resources)

**Who is protected:**

- Women in domestic relationships (married, live-in, daughters, mothers, etc.)

**Key provisions:**

- Protection orders
- Residence orders (woman cannot be removed from shared household)
- Monetary relief
- Custody orders
- Compensation orders

**Role of psychiatrist:**

- Document psychological impact (PTSD, depression, anxiety)
- Assess for capacity (if victim is dissociating, in crisis)
- Provide expert testimony on psychological consequences of abuse
- Do NOT be an advocate, be objective

> EXAM PEARL
> PWDV Act covers women in LIVE-IN relationships, not just married women. This was a progressive inclusion in 2005.

### 9.3 Elder Abuse

**Types:**

- Physical abuse
- Psychological/emotional abuse
- Financial exploitation
- Neglect (active or passive)
- Sexual abuse
- Abandonment

**Indian context:**

- Maintenance and Welfare of Parents and Senior Citizens Act 2007: Children have legal duty to maintain parents; Maintenance Tribunals can order support
- No specific elder abuse criminal statute at national level

**Psychiatric assessment:**

- Distinguish elder abuse from dementia-related behavioral changes
- Look for signs: unexplained injuries, fearfulness, unusual financial transactions, caregiver refusing private access to elder
- Capacity to report abuse (may need advocacy)

---

# SECTION 10: CONSENT IN PSYCHIATRY

## 10.1 Informed Consent in Psychiatric Practice

**Elements (DVCCD framework):**

- **D**isclosure of information
- **V**oluntariness
- **C**omprehension
- **C**apacity
- **D**ecision

**Specific issues in psychiatry:**

- Psychosis may impair comprehension and appreciation
- Depression may impair autonomous decision-making (hopelessness, worthlessness)
- Mania may impair realistic risk-benefit analysis
- Intellectual disability may impair understanding

**Threshold for consent:**

- Higher-risk decisions require higher capacity threshold
- Sliding scale model: Lower risk procedures require less capacity; higher risk requires more

## 10.2 Substitute Decision-Making

When a person lacks capacity:

**Hierarchy in India (under MHCA 2017 and common law):**

1. Advance directive (if exists)
2. Nominated representative (as designated)
3. Spouse/partner
4. Parent
5. Sibling
6. Other relative
7. MHRB-appointed person
8. In emergencies: treating psychiatrist makes best-interest decision

**Substituted judgment standard:** What would THIS person have decided if they had capacity?

**Best interests standard:** What is objectively in the person's best interests?

> **EXAM PEARL**
> MHCA 2017 prefers the "substituted judgment" approach via advance directives and nominated representatives, it tries to preserve the person's own voice as much as possible.

## 10.3 Therapeutic Privilege

**Definition:** Withholding information from a patient when disclosure would cause harm.

**When applicable:**

- Disclosure would cause serious deterioration
- Disclosure would prevent rational decision-making
- The information is not relevant to the decision at hand

**Limitations:**

- Should not be used to override patient autonomy
- Not a blanket license to withhold information
- Must document reasoning

> **EXAM PEARL**
> Therapeutic privilege is an EXCEPTION to informed consent, not a routine practice. It must be used sparingly and always in the patient's genuine interest, not the clinician's convenience.

## 10.4 Involuntary Treatment: Ethical Considerations

**Justifications for involuntary treatment:**

1. Paternalism: Person's own wellbeing justifies overriding autonomy
2. Harm prevention: Protect third parties from harm
3. Capacity substitution: Person temporarily lacks capacity

**Critiques:**

- Violates autonomy (Principle of Respect for Persons)
- Risk of misuse for social control (history: Soviet psychiatry, India's MHA 1987 abuses)
- UN CRPD (Article 12, 14, 17): Involuntary treatment may violate equal recognition before the law

**UN CRPD and India:**

- India ratified CRPD in 2007
- CRPD Article 12: Equal recognition before law, supports legal capacity for ALL
- CRPD Article 14: Liberty and security, no deprivation of liberty based solely on disability
- Tension with domestic mental health law (MHCA 2017 still allows involuntary admission)

EXAM PEARL

The UN CRPD's absolute prohibitionist stance on involuntary treatment is controversial. Many countries (including India) maintain that capacity-based involuntary treatment with procedural safeguards is compatible with CRPD. This is an active debate in international mental health law.

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# SECTION 11: SPECIAL TOPICS

## 11.1 Therapeutic Relationship and Boundary Violations

**Types of boundary violations:**

- Sexual boundary violations (most serious)
- Financial exploitation
- Role reversal
- Dual relationships
- Excessive self-disclosure
- Physical contact beyond handshake

**Slippery slope:** Small violations often precede larger ones

- Clinical significance: boundary violations damage therapeutic alliance, may re-traumatize patients

**Indian context:**

- Medical Council of India (now NMC) code of ethics prohibits sexual relationships with patients
- Criminal liability possible under BNS (sexual assault, rape if applicable)

## 11.2 Confidentiality and Its Limits

**Duty of confidentiality:**

- Core ethical obligation
- Basis of therapeutic relationship
- Legally protected (MHCA 2017, Section 23)

**Exceptions (when confidentiality can/must be broken):**

| SITUATION · OBLIGATION | |
|---|---|
| **Imminent risk to third party (Tarasoff principle)** | Warn + protect |
| **Court order** | Disclose |
| **Infectious diseases (including HIV, depending on context)** | Report |

**Child abuse** Report

**Fitness for duty (e.g., pilots, drivers)** Duty varies

**Insurance claims (with consent)** Disclose

> EXAM PEARL
>
> Tarasoff v. Regents of University of California (1976): "Duty to protect", therapist must take reasonable steps to protect identifiable potential victims when patient poses credible threat. NOT formally law in India but influential in ethics guidelines.

### 11.3 Fitness for Duty Assessments

**Common contexts:**

- Fitness to drive: Severe mental illness, epilepsy, dementia, CMVR regulations
- Fitness to practise (medical/legal professionals with mental illness)
- Return to work after psychiatric hospitalization
- Aviation medical fitness (DGCA regulations)

**Principles:**

- Not the treating clinician's job, conflict of interest
- Independent assessment preferred
- Risk-benefit analysis
- Condition-specific functional impairment assessment

## REVISION SUMMARY TABLE

| TOPIC | KEY POINT | SECTION |
|---|---|---|
| **MHCA 2017 in force** | 29 May 2018 | 1.1 |
| **Mental illness definition** | Excludes intellectual disability | 1.2 |
| **Section 115 MHCA** | Decriminalization of attempted suicide | 1.7 |
| **Advance directive** | Must be written, registered, witnessed | 1.4 |
| **MHRB composition** | Judge + psychiatrist + person with lived experience | 1.5 |
| **Supported admission review** | MHRB within 7 days | 1.6 |
| **RPwD 2016 disabilities** | 21 conditions (up from 7 in 1995 Act) | 2.2 |

| TOPIC | KEY POINT | SECTION |
|---|---|---|
| **Benchmark disability** | ≥40%, threshold for reservation | 2.3 |
| **Reservation in govt jobs** | 4% (1% each: locomotor, visual, hearing, intellectual+mental) | 2.4 |
| **NDPS Section 64A** | Immunity for addicts seeking treatment | 3.4 |
| **Small vs commercial quantity** | Substance-specific; heroin: 5g vs 250g | 3.3 |
| **McNaughton rules** | Cognitive only, nature of act OR wrong | 4.2 |
| **Section 84 IPC / BNS 22** | Unsoundness of mind, incapable of knowing | 4.3 |
| **Fitness to stand trial** | PRESENT capacity, distinct from insanity at time of offense | 5.1 |
| **Testamentary capacity** | Banks v Goodfellow, 4 elements | 6.1 |
| **HCR-20** | 20 items: Historical (10) + Clinical (5) + Risk Management (5) | 7.1 |
| **TOMM** | Memory malingering, chance = 25/50 | 7.3 |
| **SIRS-2** | Feigned psychiatric symptoms, gold standard | 7.3 |
| **Expert witness duty** | Duty to court, not to party | 8.3 |
| **PWDV Act** | Covers live-in relationships | 9.2 |
| **Unmodified ECT** | Prohibited under MHCA 2017 | 1.10 |

*Sources: Kaplan & Sadock's Synopsis of Psychiatry (12th ed.); Uday Kumar's Forensic Psychiatry and Medicine; MHCA 2017 (Act No. 10 of 2017); BNS 2023; RPwD Act 2016; NDPS Act 1985 (as amended); IPC 1860; PWDV Act 2005.*

CHAPTER 02 · FORENSIC LAW

# Model Answers

**Format:** Each answer is structured for exam conditions. Long answers (10–15 marks): 600–800 words + tables. Short notes (5 marks): 250–350 words. Introduction → Body → Conclusion format.

## ANSWER 1: Mental Healthcare Act 2017: Key Provisions (15 marks)

### Introduction

The Mental Healthcare Act 2017 (MHCA 2017), enacted as Act No. 10 of 2017 and enforced from 29 May 2018, replaced the Mental Health Act 1987. It represents a paradigm shift from custodial to rights-based care, aligning Indian mental health law with the UN Convention on the Rights of Persons with Disabilities (CRPD).

### Key Provisions

**1. Definition of Mental Illness (Section 2)**

Mental illness is defined as "substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgement, behaviour, capacity to recognise reality, or ability to meet the ordinary demands of life." Intellectual disability is explicitly excluded.

**2. Rights of Persons with Mental Illness (Chapter V, Sections 18–28)**

| RIGHT · SECTION | |
|---|---|
| **Right to access mental healthcare** | 18 |
| **Right to community living** | 19 |
| **Right to protection from cruel treatment (including prohibition of chaining)** | 20 |
| **Right to equality and non-discrimination** | 21 |
| **Right to insurance parity** | 21(4) |
| **Right to confidentiality** | 23 |
| **Right to legal aid** | 26 |

**3. Advance Directives (Sections 5–14)**

Persons with mental illness may document treatment preferences and nominate a representative for decision-making during incapacity. Must be in writing, witnessed, and

registered.

**4. Admission Procedures**

- *Independent admission:* Voluntary, person has capacity.
- *Supported admission:* Two psychiatric certificates of incapacity + application by nominated representative; MHRB review within 7 days.
- *Emergency admission:* 72-hour window; immediate risk to life.

**5. Mental Health Review Board (MHRB), Sections 73–98**

District-level quasi-judicial body. Composition: Judicial Magistrate + psychiatrist + person with lived experience. Reviews admissions, registers advance directives, adjudicates complaints.

**6. Section 115, Decriminalization of Attempted Suicide**

Persons attempting suicide are presumed to have severe stress and shall not be prosecuted under Section 309 IPC (now Section 226 BNS). Government has duty to provide care and rehabilitation.

**7. Prohibition of Treatments (Section 97)**

Unmodified ECT is prohibited. Modified ECT is mandatory. Psychosurgery requires MHRB approval. Sterilization as treatment for mental illness is prohibited.

**8. Mental Health Authorities**

Central Mental Health Authority (CMHA) and State Mental Health Authority (SMHA) established for registration, standard-setting, and oversight of Mental Health Establishments.

**9. Insurance Parity (Section 21(4))**

Insurers must provide mental health insurance on the same basis as physical health insurance.

## Conclusion

MHCA 2017 is a landmark legislation that shifts power from the institution to the individual. Its emphasis on autonomy (advance directives, nominated representatives), rights (equality, non-discrimination, insurance), and oversight (MHRB, SMHA) marks a significant advance over MHA 1987.

> **EXAM PEARL**
> Always include Section 115 (decriminalization of suicide) as a landmark provision, examiners specifically look for it.

# ANSWER 2: MHCA 2017 vs Mental Health Act 1987: Comparison (10 marks)

## Introduction

The Mental Health Act 1987 and its successor MHCA 2017 differ fundamentally in philosophy, the former was paternalistic and institution-focused; the latter is rights-based and community-oriented.

## Comparative Table

| PARAMETER | MHA 1987 | MHCA 2017 |
|---|---|---|
| **Year in force** | 1993 | 29 May 2018 |
| **Philosophy** | Custodial / paternalistic | Rights-based / UN CRPD aligned |
| **Definition of mental illness** | Narrower; listed conditions | Broader functional definition; excludes ID |
| **Voluntary admission** | Allowed | Renamed "independent admission" |
| **Involuntary admission** | Simpler, one psychiatrist opinion | Requires 2 psychiatrists + MHRB review |
| **Advance directives** | Not mentioned | Section 5–14: explicit provision |
| **Nominated representative** | Not mentioned | Chapter II: detailed provision |
| **Review body** | No independent review body | MHRB, district-level, quasi-judicial |
| **Decriminalization of suicide** | Section 309 IPC applied | Section 115: presumption of severe stress |
| **Insurance parity** | Not mentioned | Section 21(4): mandatory parity |
| **ECT without anaesthesia** | Not explicitly prohibited | Section 97: PROHIBITED |
| **Chaining prohibition** | Not explicit | Section 20: absolute prohibition |
| **Registration of MHEs** | Optional | Mandatory (SMHA registration) |
| **Mental Health Authority** | State Mental Health Authorities only | CMHA + SMHA, expanded functions |
| **Minimum standards** | Vague | Detailed regulations |
| **Penalty provisions** | Limited | Enhanced with SMHA enforcement |

### Conclusion

MHCA 2017 is substantially stronger in rights protection, procedural safeguards, and alignment with international standards. The inclusion of MHRB, advance directives, nominated representatives, and insurance parity are landmark additions.

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## ANSWER 3: McNaughton Rules: Discuss (10 marks)

### Introduction

The McNaughton Rules, formulated in 1843 by the House of Lords following the case of Daniel McNaughton, remain the cornerstone of the insanity defense in most common-law jurisdictions, including India (Section 84 IPC / Section 22 BNS 2023).

### Background: The McNaughton Case

Daniel McNaughton shot Edward Drummond (secretary to PM Robert Peel) in 1843, believing he was being persecuted by the Tory Party. He was found not guilty by reason of insanity and detained in Bethlem Hospital. The verdict caused public outcry, prompting the House of Lords to formulate the rules.

### The McNaughton Rules (1843)

To establish a defense on the ground of insanity, it must be proved that at the time of the act:

1. **The accused was labouring under such a defect of reason**
2. **From disease of the mind** (not necessarily medical disease, legal concept)
3. **As not to know the nature and quality of the act being done** (did not understand what they were doing)
4. **OR if he knew the nature of the act, he did not know that what he was doing was wrong**, either morally or legally wrong

### Application in Indian Law

Section 84 IPC (now Section 22 BNS 2023) directly incorporates McNaughton principles:

"Nothing is an offence which is done by a person who, at the time of doing it, by reason of unsoundness of mind, is incapable of knowing the nature of the act, or that he is doing what is either wrong or contrary to law."

**Key differences from original McNaughton:**

- Uses "unsoundness of mind" (broader) rather than "disease of the mind"
- Adds "contrary to law" as an alternative to "wrong", dual test
- Temporal requirement: "at the time of doing it" is explicit

### Limitations of McNaughton Rules

| LIMITATION · EXPLANATION | |
|---|---|
| **Purely cognitive** | Ignores volitional impairment (irresistible impulse) |
| **Binary standard** | All-or-nothing; no diminished responsibility |
| **"Disease of the mind" vague** | Legal term, not psychiatric |
| **Difficult to assess retrospectively** | Mental state at time of offense must be reconstructed |
| **Ignores partial impairment** | Partial psychosis not covered |

### Alternative Standards

| RULE | KEY PRINCIPLE | STATUS IN INDIA |
|---|---|---|
| **Irresistible impulse** | Cannot control behavior despite knowing it's wrong | Not recognized |
| **Durham Rule (1954)** | Act is "product of" mental disease | Not applicable |
| **Model Penal Code (ALI, 1962)** | Lacks substantial capacity to appreciate criminality OR conform conduct | Not applicable |
| **Diminished responsibility (UK)** | Reduces murder → manslaughter | Not formal doctrine |

### Conclusion

The McNaughton Rules, despite their 1843 origins, remain central to the insanity defense in India via Section 84 IPC/BNS 22. Their limitation to cognitive impairment and binary nature are significant drawbacks. Courts supplement them with clinical expert testimony to understand the full picture of the accused's mental state.

---

## ANSWER 4: Fitness to Stand Trial: Assessment and Management (10 marks)

### Introduction

Fitness to stand trial (competency to stand trial) refers to the current capacity of an accused to understand the legal proceedings and assist meaningfully in their own defense. Unlike the insanity defense (retrospective), fitness is assessed in the PRESENT.

## Legal Basis in India

**Section 328 CrPC (now Section 368 BNSS):** Magistrate can inquire into accused's mental state if they appear unable to make their defense.

**Section 329 CrPC (now Section 369 BNSS):** If found unfit, trial is postponed; accused detained in safe custody.

**Section 330 CrPC (now Section 370 BNSS):** Accused may be detained in a psychiatric hospital.

## Criteria for Fitness

The accused must demonstrate current ability to:

1. Understand the nature of the charges
2. Understand the legal process (roles of judge, counsel, prosecution)
3. Understand potential consequences (imprisonment, acquittal)
4. Communicate meaningfully with their lawyer
5. Follow courtroom proceedings
6. Assist in preparation of their defense
7. Give coherent and relevant instructions

> **EXAM PEARL**
> Fitness is about CURRENT function, NOT about mental state at time of offense. A person who was psychotic during the crime may now be fit; a person with dementia may be permanently unfit.

## Psychiatric Assessment

**Clinical domains:**

- Orientation and cognitive state (MMSE, MoCA)
- Understanding of charges and legal process
- Ability to recall and narrate relevant events
- Current psychotic symptoms interfering with understanding
- Presence of relevant delusions (e.g., delusions that counsel is against them)
- Ability to communicate rationally

**Instruments:**

- MacArthur Competence Assessment Tool, Criminal Adjudication (MacCAT-CA)
- Fitness Interview Test, Revised (FIT-R)
- Georgia Court Competency Test

### Report Structure for Fitness

A fitness report to court must include:

1. Basis of examination (date, duration, sources reviewed)
2. Brief psychiatric history
3. Current MSE findings
4. Assessment of specific fitness criteria
5. Opinion on fitness
6. If unfit: likely duration of incapacity, treatability

### Management of Unfit Accused

SCENARIO · MANAGEMENT

**Treatable condition causing unfitness** Treat; re-evaluate after clinical stabilization

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**Fitness restored after treatment** Trial proceeds

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**Permanent incapacity (e.g., severe dementia, permanent psychosis)** Section 330 CrPC, indefinite detention in psychiatric hospital

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**Minor offense + poor prognosis** Magistrate may discharge in interest of justice

### Ethical Issues

- An unfit accused may be detained indefinitely, potentially longer than if convicted. This raises serious rights concerns.
- MHCA 2017 and CRPD tension: involuntary detention of unfit accused must have periodic review.

### Conclusion

Fitness to stand trial balances the accused's right to a fair trial with the state's interest in criminal justice. The psychiatrist's role is to objectively assess current capacity and, where possible, provide treatment to restore fitness.

---

## ANSWER 5: Testamentary Capacity (10 marks)

### Introduction

Testamentary capacity is the mental capacity required to make a valid will. It is assessed at the time the will was made, not at the time of legal challenge.

### Legal Standard: Banks v Goodfellow (1870)

The landmark UK case, followed in India, established that a testator must:

1. **Know the nature of making a will and its effects**, understand what a will is and what it does
2. **Know the extent of their property**, not exact value, but general nature of assets
3. **Know the natural claims on their bounty**, identify who would ordinarily inherit (spouse, children, relatives)
4. **Not be under a disorder of the mind that poisons affections, perverts sense of right, or prevents exercise of natural faculties**, no insane delusion influencing the disposition

## Psychiatric Conditions Affecting Testamentary Capacity

| CONDITION | IMPACT |
|---|---|
| **Alzheimer's dementia** | Impairs all four elements as disease progresses |
| **Psychosis with delusions about family** | Element 4, insane delusions may vitiate capacity |
| **Severe depression** | Nihilistic delusions may impair elements 2 and 4 |
| **Bipolar mania** | Grandiosity may lead to irrational bequests |
| **Intellectual disability (mild)** | May retain capacity with appropriate support |
| **Delirium** | Usually incapacitates; fluctuating |

## Key Legal Principles

**Lucid intervals:** A person with intermittent mental illness (e.g., bipolar disorder, episodic psychosis) may have testamentary capacity during a lucid interval. A will made during a lucid interval is valid.

**Burden of proof:** Presumption in favor of sanity. Those challenging the will must prove incapacity. However, if the testator was known to have mental illness at the time, the burden shifts.

**Time-specific:** Capacity must exist at the time of signing, not before or after.

## Psychiatric Assessment

When assessing testamentary capacity (prospective or retrospective):

1. Document diagnosis and its effect on cognition
2. Assess specific elements of Banks v Goodfellow
3. Review contemporaneous records (clinical notes, witness observations at time of will)
4. For retrospective assessment: reconstruct mental state from records, witness accounts, collateral sources

### Conclusion

Testamentary capacity requires four specific cognitive and reality-testing abilities. Even persons with significant mental illness may retain capacity during lucid intervals. The psychiatrist's task is to assess function at the specific time relevant to the legal question.

> **EXAM STRATEGY**
> In 10-mark answers on testamentary capacity, always name Banks v Goodfellow explicitly and enumerate all four criteria. Missing even one criterion loses marks.

---

## ANSWER 6: RPwD Act 2016: Key Provisions (10 marks)

### Introduction

The Rights of Persons with Disabilities Act 2016 (RPwD Act 2016) replaced the Persons with Disabilities Act 1995, aligning India's disability law with the UN CRPD. It came into force on 19 April 2017.

### Key Provisions

**1. Expanded Definition of Disability (21 conditions)**

The 1995 Act covered 7 disabilities. RPwD 2016 covers 21, including:

- Mental illness
- Intellectual disability (previously "mental retardation")
- Autism Spectrum Disorder (ASD)
- Specific learning disabilities
- Multiple disabilities including deafblindness

**2. Benchmark Disability**

Disability of 40% or more = "benchmark disability", threshold for most benefits, reservations, and entitlements.

**3. Reservation in Government Employment (Section 34)**

- 4% of vacancies reserved (up from 3% in 1995 Act)
- Breakdown: locomotor (1%), visual (1%), hearing (1%), intellectual + mental illness combined (1%)

**4. Rights Framework (Chapters II–IV)**

- Non-discrimination in education, employment, health
- Right to live in community
- Right to accessible infrastructure
- Right to legal recognition and legal capacity

**5. Limited Guardianship (Section 14)**

Plenary guardianship replaced by limited guardianship, person retains legal capacity in all other domains. Supports CRPD Article 12 (equal recognition before the law).

**6. UDID Card**

Unique Disability ID card issued after assessment by District Medical Board. Smart card with embedded disability certificate.

**7. Education (Sections 16–17)**

Inclusive education in government-funded schools. Reasonable accommodation for students with benchmark disabilities.

**8. Penal Provisions (Chapter XI)**

Penalties for atrocities against persons with disabilities, up to 5 years imprisonment.

### Conclusion

RPwD 2016 is a significant advancement in disability rights, expanding coverage from 7 to 21 conditions, increasing reservations, establishing limited guardianship, and creating enforcement mechanisms.

---

## ANSWER 7: Advance Directives under MHCA 2017 (5 marks)

### Introduction

Advance directives (Sections 5–14, MHCA 2017) allow persons with mental illness to document their treatment preferences and nominate a representative for periods of incapacity, respecting autonomy even when temporarily lost.

### Making an Advance Directive

- Person must have capacity at time of making
- Must be in writing
- Signed/thumb-printed in presence of two witnesses
- Countersigned by a Gazetted Officer or Notary Public
- Registered with the local MHRB

### Contents

The directive may specify:

- How the person WISHES to be treated during a mental health crisis
- How the person does NOT wish to be treated
- Nomination of a representative

### Nominated Representative (NR)

The person designated to make decisions on behalf of the person during incapacity. If no NR is named, a hierarchy applies: spouse → parent → sibling → other relative → MHRB-appointed person.

### Can Advance Directives be Overridden?

Yes, the treating psychiatrist may not follow the directive if:

- It would cause serious harm to the person or others
- It is impossible to follow in the clinical context
- Must inform MHRB if directive not followed

### Conclusion

Advance directives are a cornerstone of MHCA 2017's autonomy-based approach. They give persons with mental illness a persistent voice in their treatment, even during periods of incapacity.

---

## ANSWER 8: Involuntary Admission Process under MHCA 2017 (10 marks)

### Introduction

MHCA 2017 provides for "supported admission" as the mechanism for involuntary admission, with robust procedural safeguards absent from the MHA 1987.

### Types of Admission

| TYPE | BASIS | PROCESS |
|---|---|---|
| **Independent** | Capacity present; voluntary | Self-application; 24h notice to leave |
| **Supported** | Incapacity + clinical need | NR application + 2 psychiatric assessments + MHRB |
| **Emergency** | Imminent risk | Police/Magistrate/family brings person; 72h emergency care |

### Supported Admission: Step by Step

**Step 1:** Nominated representative (or relative/caregiver) makes written application to MOIC of the MHE.

**Step 2:** MOIC arranges for two independent mental health professionals (at least one psychiatrist) to assess the person separately.

**Step 3:** Both assessors must certify:

- Person has mental illness
- Person lacks capacity to make mental healthcare decisions
- Admission is necessary for care and treatment

**Step 4:** MOIC reviews both certificates. If criteria met, admission proceeds.

**Step 5:** MHRB notified within 3 days of admission.

**Step 6:** MHRB reviews within 7 days of notification.

**Step 7:** If MHRB does not confirm, person must be discharged.

## Duration and Extension

| PERIOD | AUTHORITY |
|---|---|
| **Initial admission** | Up to 30 days |
| **First extension** | MHRB, additional 30 days |
| **Further extensions** | MHRB, 30 days each |
| **Up to 180 days total** | MHRB authority |
| **Beyond 180 days** | High Court order required |

## Rights During Admission

- Right to information about diagnosis and treatment
- Right to communicate with NR, family, legal representative
- Right to make complaints to MHRB
- Right to refuse consent to specific treatments (if capable)
- Right to ECT only in modified form

## Emergency Admission (Section 94)

- For persons presenting imminent risk
- Police officer, Judicial Magistrate, or family can bring
- Emergency care for 72 hours
- After 72 hours: must convert to supported admission process or discharge

## Conclusion

MHCA 2017's supported admission process is significantly more rights-protective than MHA 1987, requiring two independent assessments, MHRB oversight within 7 days, and time-limited extensions with judicial oversight beyond 180 days.

# ANSWER 9: Informed Consent in Psychiatric Practice (5 marks)

## Introduction

Informed consent is the process by which a patient, with adequate information and decision-making capacity, voluntarily agrees to a proposed intervention.

## Five Essential Elements

ELEMENT · REQUIREMENT

**Disclosure** Diagnosis, proposed treatment, alternatives, risks, benefits, consequences of refusing

**Comprehension** Patient must understand the information, not merely hear it

**Voluntariness** Free from coercion, undue influence, or manipulation

**Capacity** Ability to understand, appreciate, reason, and express a decision

**Decision** Patient must communicate a clear decision

## Capacity Assessment (MacArthur Model)

1. Understand the relevant information
2. Appreciate how it applies to their situation
3. Reason about options and their implications
4. Express and maintain a consistent choice

## Psychiatric Challenges

- Active psychosis impairs comprehension and appreciation
- Severe depression may impair autonomous decision-making
- Mania may lead to unrealistic risk-benefit analysis
- Intellectual disability may limit understanding

## When Capacity is Absent

Hierarchy under MHCA 2017: advance directive → nominated representative → family → MHRB → best-interest decision by clinician in emergency.

## Conclusion

Informed consent in psychiatry requires ongoing assessment, capacity is dynamic, decision-specific, and may fluctuate with illness severity. The threshold for capacity is proportional to the risk of the proposed intervention.

## ANSWER 10: NDPS Act 1985: Relevance to Psychiatry (5 marks)

### Introduction

The Narcotic Drugs and Psychotropic Substances Act 1985 is the primary legislation governing control of narcotic and psychotropic substances in India, with specific provisions for treatment of addiction.

### Schedules

- **Schedule I:** Narcotic drugs (heroin, morphine, cocaine, cannabis), highest control
- **Schedule II:** Psychotropic substances (amphetamines, barbiturates, benzodiazepines)

### Offenses and Penalties

Penalties depend on quantity: small quantity (lighter penalties) vs commercial quantity (10–20 years rigorous imprisonment). Death penalty under Section 31A for repeat commercial offenses.

### Section 64A: Treatment Immunity (Key Provision)

A person addicted to any drug who voluntarily submits to treatment at a recognized de-addiction center is immune from prosecution for personal use/possession. This creates legal space for treatment-seeking without fear of punishment.

### 2014 Amendment

Simplified access to essential narcotic drugs for palliative care, addressed over-restriction in cancer pain management.

### Opioid Substitution Therapy

OST (buprenorphine, methadone) is legally permitted under NDPS Act, subject to registration of centers. Critical for management of opioid use disorder.

### Conclusion

NDPS Act balances control of drug trafficking with treatment of addiction. Section 64A is the key provision for psychiatrists, it protects patients from prosecution when they seek treatment voluntarily.

---

## ANSWER 11: Violence Risk Assessment (10 marks)

### Introduction

Violence risk assessment is a structured clinical activity aimed at estimating the probability that a person will commit violence and identifying factors that can be modified to reduce risk.

## Approaches

| APPROACH | METHOD | EXAMPLE | LIMITATION |
|---|---|---|---|
| **Unstructured clinical judgment** | Clinician's intuition | | Poor reliability, validity |
| **Actuarial** | Statistical formula from risk factors | VRAG, Static-99 | Ignores clinical factors |
| **Structured Professional Judgment (SPJ)** | Guidelines + clinical judgment | HCR-20, START | Current standard |

## HCR-20 V3 (Historical Clinical Risk Management-20)

**H, Historical subscale (10 items): Past, static factors**

H1. Violence history; H2. Other antisocial behaviour; H3. Relationships; H4. Employment; H5. Substance use; H6. Major mental disorder; H7. Personality disorder; H8. Traumatic experiences; H9. Violent attitudes; H10. Treatment/supervision response

**C, Clinical subscale (5 items): Current mental state**

C1. Insight; C2. Violent ideation/intent; C3. Symptoms of major mental disorder; C4. Instability; C5. Treatment response

**R, Risk Management subscale (5 items): Future context**

R1. Professional services; R2. Living situation; R3. Personal support; R4. Treatment response; R5. Stress/coping

**Output:** Low / Moderate / High risk + individualized risk formulation

## Key Risk Factors

**Static (cannot change):**

- Prior violence, single best predictor
- Age at first violent act (younger = higher)
- Psychopathy (PCL-R score)

**Dynamic (modifiable):**

- Active psychosis (threat/control-override delusions > hallucinations)
- Substance use
- Medication non-adherence
- Violent ideation
- Instability of housing/relationships

### MacArthur Study Findings

Mental illness alone does NOT significantly increase violence risk. Comorbid substance use + mental illness dramatically increases risk. Specific symptom clusters (threat/control-override) more predictive than diagnosis.

### Conclusion

HCR-20 SPJ is the current standard for violence risk assessment. Risk assessment is not about prediction, it is about formulation and risk management planning. The goal is to identify modifiable risk factors and inform intervention.

---

## ANSWER 12: Forensic Report Writing (5 marks)

### Introduction

A forensic psychiatric report is a legal document providing expert opinion on a psychiatric question relevant to legal proceedings. It must be objective, evidence-based, and directly responsive to the referral question.

### Structure

1. **Identifying information:** Evaluee name (anonymized in example), DOB, date of assessment, referral source, legal question
2. **Sources of information:** Interview, medical records, police reports, collateral, psychological tests
3. **Relevant history:** Psychiatric, medical, substance use, developmental, social, legal history
4. **Mental Status Examination (MSE)**
5. **Psychological test results** (if applicable)
6. **Formulation:** Integration of data relevant to the legal question
7. **Opinion:** Direct, unambiguous answer to the referral question
8. **Recommendations**
9. **Signature and credentials**

### Key Principles

- Duty is to the COURT, not to the retaining party
- Opinion stated to "reasonable degree of medical certainty"
- Limitations and uncertainties must be disclosed
- Factual findings and opinions kept clearly separate

### Common Pitfalls to Avoid

- Excessive jargon (judge must understand)
- Advocacy for client beyond what data supports
- Conclusory statements without reasoning
- Failure to address the specific legal question

---

## ANSWER 13: Section 84 IPC / Section 22 BNS: Insanity Defense (10 marks)

### Introduction

Section 84 of the Indian Penal Code (now Section 22 of the Bharatiya Nyaya Sanhita 2023) provides a complete defense to a criminal charge when the accused was, at the time of the act, by reason of unsoundness of mind, incapable of knowing the nature of the act or that it was wrong or contrary to law.

### Statutory Text (Section 84 IPC / Section 22 BNS)

"Nothing is an offence which is done by a person who, at the time of doing it, by reason of unsoundness of mind, is incapable of knowing the nature of the act, or that he is doing what is either wrong or contrary to law."

### Key Elements

ELEMENT · DETAIL

**At the time of doing** Temporal requirement, mental state at the specific moment of the offense

**Unsoundness of mind** Broader than McNaughton's "disease of mind", includes psychosis, severe ID, organic states

**Incapable of knowing** Complete incapacity, partial impairment insufficient

**Nature of the act** Did not understand WHAT they were doing

**Wrong or contrary to law** Did not know act was morally wrong OR legally prohibited

### Conditions That May Qualify

- Schizophrenia with command hallucinations or delusional motivation
- Severe bipolar disorder (mania with psychotic features)
- Dementia with paranoid delusions
- Severe intellectual disability
- Epileptic automatism

- Delirium (non-self-induced)
- Involuntary intoxication

### Conditions That Do NOT Qualify

- Voluntary intoxication alone
- Personality disorder alone (no psychotic features)
- Partial psychosis (still knew act was wrong)
- Psychopathy/ASPD (no cognitive impairment in the legal sense)

### Forensic Assessment

The psychiatrist must reconstruct the mental state AT THE TIME OF THE OFFENSE:

1. Review contemporaneous evidence (police reports, witness accounts, behavior at scene)
2. Psychiatric history before and after offense
3. Consistency of any psychotic symptoms with the offense
4. Evidence of purposeful, goal-directed behavior (mitigates insanity defense)
5. Attempt to conceal the act (suggests awareness of wrongness)

> **EXAM PEARL**
> If the accused attempted to hide the act, ran away, or showed any behavior suggesting awareness of wrongness, the insanity defense is weakened even if they have a diagnosis of schizophrenia.

### Legal Outcome

Verdict: "Not guilty by reason of insanity" (NGRI) → not acquittal → Section 330 CrPC/BNSS: detained in psychiatric hospital at government's pleasure (potentially indefinite).

### Conclusion

Section 84 IPC / Section 22 BNS provides a complete defense based on cognitive incapacity due to unsoundness of mind at the time of the offense. The psychiatrist's role is to provide objective retrospective assessment of mental state, not to advocate for the accused.

---

## ANSWER 14: Malingering: Detection and Assessment (5 marks)

### Introduction

Malingering is the intentional production or gross exaggeration of physical or psychological symptoms, motivated by external incentives such as avoiding punishment, obtaining compensation, or securing drugs.

### Distinction from Related Conditions

| CONDITION | INTENTIONAL? | MOTIVATION | DSM STATUS |
|---|---|---|---|
| **Malingering** | Yes | External gain | V code (not a disorder) |
| **Factitious disorder** | Yes | Sick role (internal) | Mental disorder |
| **Conversion disorder** | No | Unconscious | Mental disorder |
| **Somatic symptom disorder** | No | Unconscious | Mental disorder |

### Clinical Red Flags

- Symptoms atypical for any known disorder
- Symptoms present only when observed
- Cooperation with assessment is poor
- Marked discrepancy between reported impairment and observed function
- Pending litigation or criminal charges
- Known history of malingering

### Detection Instruments

INSTRUMENT · DETECTS

**TOMM (Test of Memory Malingering)** Effort/performance validity for memory

**SIRS-2 (Structured Interview of Reported Symptoms)** Feigned psychiatric symptoms, gold standard

**M-FAST** Quick screen for feigned psychiatric symptoms

**VSVT** Cognitive symptom validity

**Rey 15-Item Test** Simple screening for effort

### Conclusion

Malingering requires systematic assessment combining clinical observation, psychological testing, and collateral information. It should not be diagnosed solely on clinical suspicion.

---

## ANSWER 15: Child Custody Evaluation in Psychiatry (5 marks)

### Introduction

Child custody evaluations assess the best interests of the child in contested custody proceedings, considering parenting capacity, child's needs, and each parent's fitness.

## Legal Standard

Best Interests of the Child (BIC), Guardians and Wards Act 1890; Hindu Minority and Guardianship Act 1956.

## Assessment Components

1. Individual psychiatric evaluation of each parent
2. Assessment of parent-child relationship (direct observation)
3. Interview with child (age-appropriate)
4. Review of records: medical, school, legal
5. Psychological testing if indicated
6. Collateral information from teachers, family

## Factors Evaluated

- Parenting capacity (including mental illness, substance use, history of abuse)
- Child's developmental needs and attachment
- Child's expressed preference (if of sufficient maturity)
- Continuity of caregiving
- Each parent's willingness to support the other's relationship with the child
- History of domestic violence

## Role of Parental Mental Illness

Mental illness alone does NOT disqualify a parent. The question is whether the illness impairs parenting capacity. A stabilized parent with bipolar disorder may have excellent capacity; an unstable parent with untreated psychosis may not.

## Conclusion

Child custody evaluations require objectivity and child-centredness. The psychiatrist must resist alignment with either parent and focus solely on the child's welfare.

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*Sources: Kaplan & Sadock's Synopsis of Psychiatry (12th ed.); Uday Kumar's Forensic Psychiatry; MHCA 2017; BNS 2023; RPwD Act 2016.*

CHAPTER 03 · FORENSIC LAW

# Mnemonics & Memory Tricks

**Format:** Each mnemonic includes the device, expansion, and a brief anchor note for retention.

## MNEMONIC 1: MHCA 2017: Core Rights (Section 18–28)

### "A C E I C C L C": All Citizens Enjoy Important Civil, Community, Legal, and Care rights

| LETTER | RIGHT | SECTION |
|---|---|---|
| **A** | Access to mental healthcare | 18 |
| **C** | Community living | 19 |
| **E** | Equality and non-discrimination (includes insurance parity) | 21 |
| **I** | Information | 22 |
| **C** | Confidentiality | 23 |
| **C** | Correspondence and communication | 25 |
| **L** | Legal aid | 26 |
| **C** | Complaints | 28 |

> **CLINICAL ANCHOR**
> Add Section 20 (Protection from cruel treatment / chaining) separately, it's the most exam-cited right. "**A C [CRUEL] E I C C L C**", CRUEL goes between C (community living) and E (equality).

## MNEMONIC 2: MHCA 2017: Admission Types

### "I S E": "I See Emergencies"

| LETTER | TYPE | KEY FEATURE |
|---|---|---|
| **I** | Independent | Capacity present; voluntary |
| **S** | Supported | Incapacity + 2 psychiatrists + NR application + MHRB |

| LETTER | TYPE | KEY FEATURE |
|---|---|---|
| **E** | Emergency | Imminent risk; 72-hour window |

**Supported admission timeline:** "**72-3-7**"

- 72 hours: Emergency care window
- 3 days: MHRB notification after supported admission
- 7 days: MHRB review deadline

## MNEMONIC 3: McNaughton Rules

### "D D K K": "Doubly Don't Know, Doubly"

LETTER · ELEMENT

**D** Defect of reason

**D** Disease of the mind

**K** did not Know the nature and quality of the act

**K** OR did not Know it was wrong/contrary to law

**Alternative mnemonic:** "**DMNK**", Disease of Mind, Nature, Knowledge (of wrongness)

> EXAM PEARL
> The two K's are alternatives, only ONE needs to be proven. Either: (1) didn't know what they were doing, OR (2) knew the act but didn't know it was wrong.

## MNEMONIC 4: Elements of Valid Consent

### "D V C C D": "Do Very Carefully Consider Decisions"

LETTER · ELEMENT

**D** Disclosure of information

**V** Voluntariness

**C** Comprehension

**C** Capacity

**D** Decision

**Capacity sub-test (MacArthur):** "**U A R E**", "You ARE capable"

- **U**, Understand the information
- **A**, Appreciate its relevance to their situation
- **R**, Reason about options
- **E**, Express a consistent choice

---

## MNEMONIC 5: RPwD Act 2016: 21 Disability Categories

### Group-based recall: "P-S-I-M-B-Multiple": Physical, Sensory, Intellectual, Mental/Neuro, Blood, Multiple

**P, Physical (6):**

"**LCD-DM-A**", Locomotor, Cerebral palsy, Dwarfism, Dystrophy (muscular), Multiple (in physical group: leprosy cured), Acid attack

Specifically:

1. Locomotor disability
2. Leprosy cured
3. Cerebral palsy
4. Dwarfism
5. Muscular dystrophy
6. Acid attack victim

**S, Sensory (5):**

"**BLo-D-H-S**", Blindness, Low vision, Deaf, Hard of hearing, Speech/language

1. Blindness
2. Low vision
3. Deaf
4. Hard of hearing
5. Speech and language disability

**I, Intellectual/Developmental (3):**

"**I-S-A**", Intellectual disability, Specific learning, Autism

1. Intellectual disability
2. Specific learning disabilities
3. Autism spectrum disorder

**M/N, Mental and Neurological (2):**

"**M-N**", Mental illness, Neurological chronic

1. Mental illness
2. Chronic neurological conditions (MS, Parkinson's)

**B, Blood disorders (3):**

"**H-T-S**", Haemophilia, Thalassemia, Sickle cell

1. Haemophilia
2. Thalassemia
3. Sickle cell disease

**Multiple/Other (2):**

1. Multiple disabilities including deafblindness
2. Any other notified category

> EXAM STRATEGY
> You rarely need to recall all 21. Know the 4 groups relevant to psychiatry: intellectual disability, specific learning disabilities, ASD, mental illness. And the total count: 21 (vs 7 in 1995 Act).

---

## MNEMONIC 6: Testamentary Capacity: Banks v Goodfellow (4 Elements)

### "N E C D": "No Estate Changes Decision"

LETTER · ELEMENT

**N** Nature of making a will and its effects

**E** Extent of the property

**C** Claims, knows natural claimants (family)

**D** Disorder, no disorder of mind poisoning affections or vitiating the bequest

**Alternative:** "**W-P-C-D**", Will's meaning, Property extent, Claimants, no Disorder

> EXAM PEARL
> The word "lucid interval" is the key bridge concept, even a demented person CAN make a valid will during a lucid interval.

---

## MNEMONIC 7: HCR-20 Subscales

### "H-10, C-5, R-5": "History is 10, Clinical and Risk are 5 each"

**H subscale, "VOR-E-SMTPV" (Historical, 10 items):**

- **V**, Violence history
- **O**, Other antisocial behaviour
- **R**, Relationships
- **E**, Employment
- **S**, Substance use
- **M**, Major mental disorder
- **T**, (Personality) disorder, Traits/Personality
- **T**, Traumatic experiences
- **V**, Violent attitudes
- **T**, Treatment/supervision response

**C subscale (Clinical, 5 items), "I V S I T":**

- **I**, Insight
- **V**, Violent ideation or intent
- **S**, Symptoms (major mental disorder)
- **I**, Instability
- **T**, Treatment response

**R subscale (Risk Management, 5 items), "P L P T S":**

- **P**, Professional services and plans
- **L**, Living situation
- **P**, Personal support
- **T**, Treatment/supervision response
- **S**, Stress or coping

---

## MNEMONIC 8: Types of Guardianship under RPwD 2016

### "L vs P": "Limited replaced Plenary"

TYPE · FEATURE

**Plenary (Old)** Full guardianship, person loses ALL legal capacity

---

**Limited (New, RPwD 2016)** Restricted to specific decisions, person retains capacity otherwise

**Alignment:** Limited guardianship → CRPD Article 12 (equal recognition before law) → supported decision-making model

---

## MNEMONIC 9: Forensic Report Structure

### "IR H M F O R S": "I Really Have Made Fine Opinions Recently, Signed"

| LETTER · SECTION |
| --- |
| **I** Identifying information |
| **R** Reason for referral |
| **H** History (psychiatric, medical, social, legal) |
| **M** Mental status examination |
| **F** Formulation |
| **O** Opinion |
| **R** Recommendations |
| **S** Signature |

> **EXAM STRATEGY**
> In MCQs about forensic reports, the key distinguishing feature is that OPINION must directly and unambiguously address the specific legal question. Vague opinions are professionally unacceptable.

---

## MNEMONIC 10: Section 115 MHCA: Suicide Decriminalization

### "PASS": Presumption, Attempted Suicide, Severe Stress

- **P**, Presumption (of severe stress, rebuttable presumption)
- **A**, Attempted suicide = not a crime
- **S**, Severe stress presumed
- **S**, State must provide care and rehabilitation

**Not a full repeal**, Section 309 IPC / Section 226 BNS still exists but MHCA 115 overrides its application when severe stress is presumed.

---

## MNEMONIC 11: NDPS Act: Key Sections for Psychiatry

### "64A SAVES": Section 64A protects addicts who seek treatment

| COMPONENT · DETAIL |
|---|
| **S** Schedule I = Narcotics (heroin, morphine, cocaine, cannabis) |
| **A** Addicts who seek treatment = immune (Section 64A) |
| **V** Voluntary submission to treatment required |
| **E** Establishment must be government-recognized |
| **S** Schedule II = Psychotropics (amphetamines, barbiturates, benzos) |

**Penalty memory aid: "Small → 1 year; Commercial → 10–20 years; Repeat → Death (31A)"**

---

## MNEMONIC 12: Mens Rea Types: Severity Order

### "I Know Reckless Negligence": from most to least culpable

| LEVEL · TYPE |
|---|
| **I** Intention (highest culpability) |
| **K** Knowledge |
| **R** Recklessness |
| **N** Negligence (lowest culpability) |

> **CLINICAL ANCHOR**
> Section 84 / BNS 22 defense negates mens rea entirely, the accused lacked the mental element for any level of criminal intent.

---

## MNEMONIC 13: Malingering Detection: TOMM and SIRS

### "TOMM = Memory; SIRS = Symptoms"

- **TOMM** (Test of Memory Malingering): 50-item forced-choice; Trial 2 score < 45 suggests poor effort; chance performance = 25/50
- **SIRS-2**: Structured Interview; gold standard for PSYCHIATRIC symptom feigning (not cognitive)
- **M-FAST**: Quick screen (brief)

**Red flag acronym "DISCO":**

- **D**, Discrepancy (reported vs observed function)
- **I**, Incentive present (litigation, charges)
- **S**, Symptoms atypical (don't fit known disorders)
- **C**, Cooperation poor
- **O**, Observation-dependent symptoms (only when watched)

---

## MNEMONIC 14: MHRB Composition

### "J-P-L": "Judge, Psychiatrist, Lived experience"

- **J**, Judicial Magistrate (Chairperson)
- **P**, Psychiatrist
- **L**, Person with Lived experience of mental illness OR family member

> **EXAM PEARL**
> The "lived experience" member is what distinguishes MHRB from any prior review body in India. It's a deliberate CRPD-aligned inclusion.

---

## MNEMONIC 15: Civil Capacity Types: "T C M C"

### "The Court Makes Contracts": four types of civil capacity

LETTER · CAPACITY

**T** Testamentary capacity (make a will)

**C** Contractual capacity

**M** Matrimonial capacity (fitness to marry)

**C** Consent to treatment

**Unifying principle:** All four are TIME-SPECIFIC and DECISION-SPECIFIC, assessed at the moment the decision is made, not retrospectively or prospectively.

---

## MNEMONIC 16: Fitness to Stand Trial vs Insanity Defense

### "PAST vs PRESENT"

| | INSANITY DEFENSE | FITNESS TO STAND TRIAL |
|---|---|---|
| **Time** | PAST (at time of offense) | PRESENT (now) |

| | INSANITY DEFENSE | FITNESS TO STAND TRIAL |
|---|---|---|
| **Question** | Did they know it was wrong then? | Can they understand proceedings now? |
| **Legal basis** | Section 84 IPC / BNS 22 | Section 328–330 CrPC / BNSS 368–370 |
| **If established** | NGRI verdict | Trial postponed |
| **Outcome** | Psychiatric detention | Treatment to restore fitness |

## MNEMONIC 17: PWDV Act 2005: Types of Domestic Violence

**"PSVE²": "Physical, Sexual, Verbal-Emotional, Economic (x2 = it's covered twice in the Act)"**

TYPE · EXAMPLES

**P** Physical abuse, hitting, slapping, burning

**S** Sexual abuse, forced intercourse, sexual humiliation

**V/E** Verbal and emotional abuse, insults, threats, humiliation, isolation

**E** Economic abuse, withholding money, preventing employment, controlling assets

> EXAM PEARL
> PWDV Act covers women in LIVE-IN relationships, not just married women. Key scope distinction.

## QUICK RECALL SUMMARY TABLE

| MNEMONIC | TOPIC | DEVICE |
|---|---|---|
| **A C E I C C L C** | MHCA Rights (S18–28) | All Citizens Enjoy Important Civil... |
| **I S E + 72-3-7** | MHCA Admission types | I See Emergencies |
| **D D K K** | McNaughton Rules | Doubly Don't Know |
| **D V C C D** | Consent elements | Do Very Carefully Consider Decisions |
| **U A R E** | Capacity (MacArthur) | You ARE capable |
| **P-S-I-M-B** | RPwD 21 disabilities | Physical, Sensory, Intellectual, Mental, Blood |

| MNEMONIC | TOPIC | DEVICE |
|---|---|---|
| **N E C D** | Testamentary capacity (Banks v Goodfellow) | No Estate Changes Decision |
| **H10-C5-R5** | HCR-20 structure | History=10, Clinical=5, Risk=5 |
| **IR H M F O R S** | Forensic report sections | I Really Have Made Fine Opinions... |
| **PASS** | Section 115 MHCA | Presumption, Attempted, Severe, State |
| **64A SAVES** | NDPS key provisions | Addicts saved by 64A |
| **I K R N** | Mens rea hierarchy | I Know Reckless Negligence |
| **DISCO** | Malingering red flags | Discrepancy, Incentive, Symptoms, Cooperation, Observation |
| **J-P-L** | MHRB composition | Judge, Psychiatrist, Lived experience |
| **T C M C** | Civil capacity types | The Court Makes Contracts |
| **PAST vs PRESENT** | Insanity vs fitness | Temporal distinction |
| **P S V E²** | PWDV Act abuse types | Physical Sexual Verbal Economic |

*Sources: Kaplan & Sadock's Synopsis of Psychiatry (12th ed.); Uday Kumar's Forensic Psychiatry; MHCA 2017; RPwD Act 2016.*

# High-Yield Comparisons

## TABLE 1: MHCA 2017 vs Mental Health Act 1987

| PARAMETER | MHA 1987 | MHCA 2017 |
|---|---|---|
| **Year enacted** | 1987 | 2017 |
| **Year in force** | 1993 | 29 May 2018 |
| **Replaced** | Indian Lunacy Act 1912 | MHA 1987 |
| **Philosophy** | Custodial / paternalistic | Rights-based / UN CRPD aligned |
| **Definition of mental illness** | Listed specific conditions (schizophrenia, mood disorders, etc.) | Broad functional definition; excludes intellectual disability |
| **Intellectual disability** | Included as mental illness | Excluded, covered under RPwD 2016 |
| **Voluntary admission** | Section 15: voluntary admission | Section 86: renamed "independent admission" |
| **Involuntary admission** | One psychiatrist certificate sufficient | Two psychiatrists + MHRB review within 7 days |
| **Advance directives** | No provision | Sections 5–14: detailed framework |
| **Nominated representative** | No provision | Chapter II: explicit nomination process |
| **Review body** | No independent review body | MHRB, district-level quasi-judicial body |
| **Review body composition** | N/A | Judicial Magistrate + psychiatrist + person with lived experience |
| **Attempted suicide** | Section 309 IPC applied | Section 115: presumption of severe stress; no prosecution |
| **Insurance parity** | No provision | Section 21(4): mandatory parity with physical illness |
| **Chaining prohibition** | Not explicit | Section 20: absolute prohibition, no exceptions |

| PARAMETER | MHA 1987 | MHCA 2017 |
|---|---|---|
| **ECT without anaesthesia** | Not explicitly addressed | Section 97: explicitly PROHIBITED |
| **Psychosurgery** | Limited provisions | Requires MHRB approval |
| **ECT in minors** | Not addressed | Requires MHRB approval |
| **Registration of MHEs** | Optional | Mandatory under SMHA |
| **Mental Health Authority** | State MHAs only | CMHA + SMHA, expanded roles |
| **Standards for MHEs** | Vague | Detailed regulations under SMHA |
| **Rights codification** | Minimal | Chapter V: 10+ specific rights (Sections 18–28) |
| **UN CRPD alignment** | Pre-CRPD (India ratified CRPD 2007) | Post-ratification; explicit CRPD alignment |
| **Community mental health** | Institutional focus | Community-oriented, right to live in society |

EXAM STRATEGY

The 5 most commonly tested differences: (1) advance directives, (2) MHRB with lived experience member, (3) Section 115 suicide decriminalization, (4) chaining prohibition, (5) insurance parity. Learn these cold.

## TABLE 2: McNaughton Rules vs Irresistible Impulse vs Durham Rule

| PARAMETER | MCNAUGHTON RULES (1843) | IRRESISTIBLE IMPULSE RULE | DURHAM RULE (1954) |
|---|---|---|---|
| **Origin** | UK House of Lords, 1843 | Various US courts, 19th century | US Court of Appeals (D.C.), Durham v US |
| **Core test** | Did not know nature of act OR did not know it was wrong | Knew it was wrong but could not control impulse | Act was "product of" mental disease or defect |
| **Type of impairment** | Cognitive only | Volitional only | Either (broad) |
| **Mental faculty tested** | Knowledge / understanding | Will / self-control | Causation |
| **Standard** | Complete incapacity to know | Complete loss of control | Any mental disease producing the act |
| **Scope** | Narrow, cognitive impairment only | Moderate | Very broad |

| PARAMETER | MCNAUGHTON RULES (1843) | IRRESISTIBLE IMPULSE RULE | DURHAM RULE (1954) |
|---|---|---|---|
| **Main criticism** | Ignores volitional impairment | Hard to prove; easy to fake | Too broad; almost any behavior qualifies |
| **Status in India** | Applied via Section 84 IPC / BNS 22 | NOT recognized | NOT applicable |
| **Status in UK** | Retained with modifications | Not formal doctrine | Not applicable |
| **Status in USA** | Retained in most states | Some states | Abandoned by 1970s |
| **Accounts for ASPD/psychopathy** | No | Partially | Could |
| **Accounts for command hallucinations** | Only if no understanding of wrongness | Yes | Yes |

EXAM PEARL

India follows McNaughton via Section 84 IPC/BNS 22. Irresistible impulse is discussed academically but not a legal defense in India. Durham was largely abandoned even in the USA.

## TABLE 3: Section 84 IPC / BNS 22 vs Diminished Responsibility (UK)

| PARAMETER | SECTION 84 IPC / SECTION 22 BNS | DIMINISHED RESPONSIBILITY (UK HOMICIDE ACT 1957) |
|---|---|---|
| **Jurisdiction** | India | United Kingdom |
| **Effect** | Complete defense, no criminal liability | Partial defense, reduces murder to manslaughter |
| **Nature** | All-or-nothing | Graduated |
| **Standard** | Complete incapacity to know | Substantial impairment (not complete) |
| **Mental element** | Unsoundness of mind | Abnormality of mental functioning |
| **Cognitive vs volitional** | Cognitive only | Includes volitional impairment |
| **Applicable charges** | Any offense | Only murder → manslaughter |
| **Outcome if successful** | NGRI verdict → psychiatric detention | Reduced charge → potentially shorter sentence |
| **Psychiatric diagnosis needed** | Unsoundness of mind (any cause) | Recognized medical condition |
| **Partial impairment** | Does NOT qualify | Does qualify if substantial |

| PARAMETER | SECTION 84 IPC / SECTION 22 BNS | DIMINISHED RESPONSIBILITY (UK HOMICIDE ACT 1957) |
|---|---|---|
| **India equivalent** | No equivalent to diminished responsibility | |

**EXAM PEARL**

India does NOT have diminished responsibility. Mental illness can be a mitigating factor in sentencing, but it does not reduce the charge. This is a key distinction asked in long answers.

## TABLE 4: Independent vs Supported Admission (MHCA 2017)

| PARAMETER | INDEPENDENT ADMISSION (S.86) | SUPPORTED ADMISSION (S.87–89) |
|---|---|---|
| **Capacity** | Present, person has capacity | Absent, person lacks capacity |
| **Who initiates** | Person themselves | Nominated representative or relative |
| **Basis** | Voluntary informed decision | Clinical need + incapacity |
| **Psychiatric certificates required** | None (or one, MOIC assessment) | Two independent psychiatrists |
| **At least one must be** | N/A | A psychiatrist |
| **Certificates must confirm** | | Mental illness + incapacity + necessity of admission |
| **MHRB notification** | Not required routinely | Within 3 days of admission |
| **MHRB review** | Only if person requests or dispute arises | Mandatory within 7 days |
| **Duration, initial** | At person's discretion | Up to 30 days |
| **Discharge** | Person can leave after 24-hour notice | MHRB reviews; NR or treating psychiatrist initiates discharge |
| **Extension** | Not applicable | 30-day extensions by MHRB; beyond 180 days = High Court |
| **Rights retained** | Full | All rights under MHCA still apply |
| **Consent to treatment** | Person consents themselves | NR consents on behalf; advance directive if applicable |

## TABLE 5: RPwD Act 2016 vs MHCA 2017: Overlap and Distinction

| PARAMETER | RPWD ACT 2016 | MHCA 2017 |
|---|---|---|
| **Administered by** | Ministry of Social Justice and Empowerment | Ministry of Health and Family Welfare |
| **Enacted** | 2016 (in force April 2017) | 2017 (in force May 2018) |
| **Primary focus** | Rights, inclusion, employment, education | Mental healthcare, admission, treatment, rights |
| **Covers mental illness** | Yes, disability #15 in 21 conditions | Yes, primary subject |
| **Covers intellectual disability** | Yes, disability #12 | No, excluded |
| **Covers ASD** | Yes, disability #14 | No |
| **Covers SLD** | Yes, disability #13 | No |
| **Guardianship model** | Limited guardianship (Section 14) | Nominated representative (Chapter II) |
| **Certification** | UDID card via Medical Board | Not applicable |
| **Reservation / employment** | 4% reservation in government jobs | No employment provision |
| **Insurance** | No specific insurance provision | Section 21(4): mandatory parity |
| **Admission/treatment** | No provision | Chapters VI–VIII: detailed |
| **Decriminalization of suicide** | No provision | Section 115 |
| **Review body** | Not applicable (courts/tribunals for disputes) | MHRB, district level |
| **CRPD alignment** | Explicit CRPD basis | Explicit CRPD basis |
| **Interaction** | Both apply simultaneously for persons with mental illness | Both apply simultaneously |

**CLINICAL ANCHOR**

A patient with schizophrenia is covered by BOTH Acts simultaneously. MHCA governs admission, treatment, and rights within the mental health system. RPwD governs employment rights, education, disability certification, and guardianship for property/civil matters.

## TABLE 6: Civil Capacity: Comparison Across Domains

| PARAMETER | TESTAMENTARY CAPACITY | CONTRACTUAL CAPACITY | MATRIMONIAL CAPACITY | CONSENT TO TREATMENT |
|---|---|---|---|---|
| **Legal basis** | Indian Succession Act / common law (Banks v Goodfellow) | Section 11–12, Indian Contract Act 1872 | Section 5, Hindu Marriage Act 1955 | Common law + MHCA 2017 |
| **Standard** | 4 elements (Banks v Goodfellow) | Sound mind = understand + rational judgment re interests | Capable of valid consent; not unfit for marriage | MacArthur: understand, appreciate, reason, express |
| **Temporal requirement** | At time of making will | At time of making contract | At time of consenting to marriage | At time of consenting to treatment |
| **Effect of incapacity** | Will may be declared void | Contract voidable | Marriage voidable (Section 12 HMA) | Treatment requires substitute decision-maker |
| **Lucid interval** | Valid will possible | Valid contract possible | Valid marriage possible | Valid consent possible |
| **Mental illness effect** | Depends on whether it vitiates specific elements | Depends on understanding and judgment | Depends on capacity to consent | Depends on decision-making capacity |
| **Assessment tool** | Clinical interview + records | Clinical interview | Clinical interview | MacCAT-T, HCAT |
| **Who determines** | Court (based on psychiatric opinion) | Court | Court | Clinician (capacity); Court (competence) |
| **Retrospective assessment** | Common (post-death challenges) | Possible | Possible | Rare |

## TABLE 7: Informed Consent vs Implied Consent vs Substitute Decision-Making

| PARAMETER | INFORMED CONSENT | IMPLIED CONSENT | SUBSTITUTE DECISION-MAKING |
|---|---|---|---|
| **Definition** | Explicit, informed, voluntary agreement to treatment | Assumed from context/behavior (e.g., extending arm for blood draw) | Third party makes decision on behalf of incapacitated person |

| PARAMETER | INFORMED CONSENT | IMPLIED CONSENT | SUBSTITUTE DECISION-MAKING |
|---|---|---|---|
| **Capacity required** | Yes, full decision-making capacity | Minimal, presence implies some consent | No, specifically for incapacity |
| **Verbal/written** | Ideally written for significant procedures | Behavioral / non-verbal | Written or verbal by authorized representative |
| **Standard** | Full disclosure + comprehension | Contextual inference | Substituted judgment OR best interests |
| **Applicable in psychiatry** | Routine treatment, medication, procedures | Emergency minor procedures | MHCA 2017, NR, family, advance directive |
| **When overridden** | Emergency; therapeutic privilege | Escalating intervention | Advance directive overrides NR |
| **Legal weight** | Strongest | Weakest | Moderate, can be challenged |
| **MHCA 2017 reference** | Core principle | Not specifically referenced | Nominated representative (Chapter II) + MHRB |

## TABLE 8: Malingering vs Factitious Disorder vs Conversion Disorder

| PARAMETER | MALINGERING | FACTITIOUS DISORDER | CONVERSION DISORDER (FND) |
|---|---|---|---|
| **DSM-5 classification** | V code (not a mental disorder) | Mental disorder (F68.1) | Mental disorder (F44) |
| **Intentionality** | Yes, intentional production | Yes, intentional production | No, unconscious/involuntary |
| **Motivation** | External gain (avoid punishment, money, drugs) | Internal, sick role, medical attention | No conscious motivation |
| **Awareness** | Fully aware of feigning | Aware of feigning | Unaware; symptoms feel real |
| **Attitude to investigation** | Avoids definitive testing | May seek extensive investigation | May accept but symptoms persist |
| **Consistency of symptoms** | Inconsistent; vary with observation | Often elaborate; consistent | Often consistent; may resolve with therapy |
| **Common presentations** | Memory loss, psychosis, pain | Factitious illness, Munchausen | Paralysis, seizures, blindness, aphonia |

| PARAMETER | MALINGERING | FACTITIOUS DISORDER | CONVERSION DISORDER (FND) |
|---|---|---|---|
| **Key detection tool** | TOMM, SIRS-2, M-FAST | Clinical observation, medical record review | Positive clinical signs (e.g., Hoover sign), neuroimaging |
| **Forensic relevance** | Very high, criminal/insurance context | Moderate | Low (unless misidentified as malingering) |
| **Treatment approach** | Confront carefully; no psychiatric treatment indicated | Therapeutic alliance; address underlying needs | CBT, physiotherapy, psychoeducation, EFT |
| **Prognosis** | Ends when incentive removed | Variable; may be chronic | Variable; often improves with treatment |

**EXAM PEARL**

Malingering ≠ mental disorder in DSM-5. Factitious disorder IS a mental disorder. Conversion disorder is the one most often confused with malingering in clinical practice, use Hoover sign, functional neurological examination, and neuroimaging to distinguish.

## TABLE 9: Violence Risk: Static vs Dynamic Risk Factors

| CATEGORY | STATIC RISK FACTORS | DYNAMIC RISK FACTORS |
|---|---|---|
| **Definition** | Cannot change; historical | Can change; current or future |
| **Use in risk assessment** | Establish baseline risk level | Guide treatment and risk management |
| **Examples** | Prior violence history | Active psychosis |
| | Age at first violent act | Active substance use |
| | Male sex | Medication non-adherence |
| | History of childhood abuse | Current violent ideation |
| | Psychopathy (PCL-R) | Unstable housing |
| | Criminal history | Poor therapeutic alliance |
| | Diagnosis of ASPD | Anger dysregulation |
| **Best single predictor** | Prior violence history | Current violent ideation with intent |
| **HCR-20 subscale** | H (Historical) | C (Clinical) + R (Risk Management) |
| **Modifiability** | No | Yes, target for intervention |

## TABLE 10: IPC Section 84 / BNS 22 vs Section 85 / BNS 23 vs Section 86 / BNS 24

| PARAMETER | S.84 IPC / S.22 BNS | S.85 IPC / S.23 BNS | S.86 IPC / S.24 BNS |
|---|---|---|---|
| **Subject** | Unsoundness of mind | Involuntary intoxication | Voluntary intoxication |
| **Defense type** | Complete defense | Complete defense | Partial defense |
| **Mental element** | Unsoundness of mind at time of act | Intoxication without knowledge/against will | Self-induced intoxication |
| **Knowledge of wrongness** | Not required (if criteria met) | Not required | Intent: may be negated; knowledge: assumed |
| **Outcome** | NGRI | NGRI equivalent | Only negates specific intent (not general intent) |
| **Voluntariness** | N/A | Involuntary (drugged without knowledge) | Voluntary consumption |
| **Example** | Psychotic patient kills during command hallucination | Person drinks drugged beverage, commits act | Intoxicated person commits assault |
| **Forensic significance** | Primary insanity defense | Rare but important exception | Most common intoxication scenario |

**EXAM STRATEGY**

These three sections are commonly asked together. The key distinction: 84/BNS 22 = mental illness complete defense; 85/BNS 23 = involuntary intoxication complete defense; 86/BNS 24 = voluntary intoxication only negates specific intent.

*Sources: Kaplan & Sadock's Synopsis of Psychiatry (12th ed.); Uday Kumar's Forensic Psychiatry; MHCA 2017; MHA 1987; IPC 1860; BNS 2023; RPwD Act 2016; Indian Contract Act 1872; Hindu Marriage Act 1955.*

# PYQ Frequency Analysis

**Scope:** Analysis of question patterns from PG exams MD Psychiatry Paper III examinations and comparable Indian PG psychiatry exit exams. Based on recurring topic clusters across 17+ years of question data.

## SECTION 1: OVERALL TOPIC FREQUENCY MAP

| TOPIC | ESTIMATED FREQUENCY | QUESTION TYPES SEEN | PRIORITY |
|---|---|---|---|
| **MHCA 2017, general provisions** | Very High (every 1–2 years) | Long answer (10–15 marks), Short note (5 marks) | **MUST KNOW** |
| **McNaughton Rules / Section 84 IPC** | Very High | Long answer, Short note | **MUST KNOW** |
| **Fitness to stand trial** | High | Short note (5 marks), occasionally long | **MUST KNOW** |
| **Testamentary capacity** | High | Short note (5 marks) | **MUST KNOW** |
| **MHCA 2017 vs MHA 1987** | High | Long answer comparative | **MUST KNOW** |
| **Advance directives (MHCA)** | High | Short note | **MUST KNOW** |
| **MHRB composition and functions** | Moderate–High | Short note | **HIGH** |
| **Informed consent in psychiatry** | Moderate–High | Short note, vignette | **HIGH** |
| **RPwD Act 2016** | Moderate | Short note | **HIGH** |
| **Violence risk assessment / HCR-20** | Moderate | Short note, long answer | **HIGH** |
| **Forensic report writing** | Moderate | Short note | **HIGH** |
| **Section 115 MHCA (suicide)** | Moderate | Short note, part of longer answer | **HIGH** |
| **NDPS Act 1985** | Moderate | Short note | **MODERATE** |
| **Malingering** | Moderate | Short note | **MODERATE** |

| TOPIC | ESTIMATED FREQUENCY | QUESTION TYPES SEEN | PRIORITY |
|---|---|---|---|
| Involuntary admission process | Moderate | Short note | **MODERATE** |
| Expert witness role | Low–Moderate | Short note | **MODERATE** |
| Diminished responsibility | Low | Part of McNaughton answers | **LOW** |
| Child custody evaluation | Low | Short note | **LOW** |
| PWDV Act 2005 | Low | Short note | **LOW** |
| Contractual capacity | Low | Part of civil capacity answers | **LOW** |
| Elder abuse | Low | Short note | **LOW** |

> **EXAM STRATEGY**
> Forensic psychiatry is a reliable source of short notes (5-mark questions) in Paper III. MHCA 2017 and McNaughton/Section 84 are the two anchors that appear as both long and short answers. Never walk in without knowing these two cold.

---

# SECTION 2: TOPIC-BY-TOPIC PYQ BREAKDOWN

## 2.1 MHCA 2017

**Frequency:** Appears in almost every exam cycle since 2018. Pre-2018, MHA 1987 was asked.

**Question formats seen:**

- "Discuss the salient features of the Mental Healthcare Act 2017." (15 marks)
- "Write a short note on Mental Healthcare Act 2017." (5 marks)
- "Compare Mental Healthcare Act 2017 with Mental Health Act 1987." (10–15 marks)
- "Write a short note on the rights of persons with mental illness under MHCA 2017." (5 marks)
- "What are the provisions regarding involuntary admission under MHCA 2017?" (10 marks)
- "Write a short note on advance directives under MHCA 2017." (5 marks)
- "Write a short note on Section 115 of the MHCA 2017." (5 marks)
- "What is the Mental Health Review Board? Describe its composition and functions." (5–10 marks)

**High-yield subtopics within MHCA:**

1. Rights of persons with mental illness (Sections 18–28), especially chaining prohibition, insurance parity
2. Advance directives, who can make, process, nominated representative
3. Section 115, decriminalization of attempted suicide
4. Admission procedures, independent, supported, emergency
5. MHRB, composition (lived experience member is a distinguishing feature), functions
6. Prohibited treatments, unmodified ECT, psychosurgery, sterilization

> **EXAM PEARL**
> "Salient features" questions test breadth. "Write a short note on Section 115" tests depth on one provision. Know both levels.

---

## 2.2 McNaughton Rules / Section 84 IPC / BNS 22

**Frequency:** Near-universal across exam years. One of the oldest and most tested topics in forensic psychiatry.

**Question formats seen:**

- "Discuss the McNaughton Rules. What are their limitations?" (10–15 marks)
- "Write a short note on Section 84 IPC." (5 marks)
- "What are the different tests for criminal responsibility? Discuss their merits and limitations." (15 marks)
- "Write a short note on insanity as a defense in criminal law." (5 marks)
- "Discuss the McNaughton Rules and irresistible impulse rule." (10 marks)
- "What is mens rea? How does mental illness affect criminal responsibility?" (10 marks)

**High-yield subtopics:**

1. The four elements of McNaughton (defect of reason, disease of mind, nature of act, knowledge of wrongness)
2. Section 84 IPC text, be able to quote it
3. Limitations of McNaughton (purely cognitive, no irresistible impulse, all-or-nothing)
4. Irresistible impulse, not recognized in India
5. Durham rule, abandoned
6. Mens rea vs actus reus
7. Outcome of successful Section 84 defense: NGRI → Section 330 CrPC detention

> **EXAM STRATEGY**
> For a 10-mark question on McNaughton, use this structure: (1) historical context, McNaughton case, (2) the four elements, (3) Section 84 IPC / BNS 22 text and comparison, (4) limitations, (5) alternative standards (irresistible impulse, Durham, with their status in India). Structured this way, you will score 8–10/10.

---

## 2.3 Fitness to Stand Trial

**Frequency:** High, appears as short note (5 marks) frequently, occasionally as a longer question.

**Question formats seen:**

- "Write a short note on fitness to stand trial." (5 marks)
- "What is testamentary capacity? How is it assessed?" (5–10 marks)
- "Differentiate between fitness to stand trial and insanity defense." (5 marks)

**High-yield points:**

1. Definition, current capacity, NOT retrospective
2. Legal basis, Section 328–330 CrPC (BNSS 368–370)
3. Criteria, 6–7 specific abilities
4. Management of unfit accused, treatment to restore fitness; indefinite detention risk
5. Distinction from insanity defense (PAST vs PRESENT)

---

## 2.4 Testamentary Capacity

**Frequency:** High, reliable short note topic.

**Question formats seen:**

- "Write a short note on testamentary capacity." (5 marks)
- "What are the criteria for testamentary capacity?" (5 marks)
- "Write a short note on Banks v Goodfellow." (5 marks)

**High-yield points:**

1. Banks v Goodfellow (1870), 4 elements (name the case)
2. Lucid interval concept
3. Burden of proof, presumption of sanity
4. Conditions commonly affecting capacity (dementia, psychosis with relevant delusions)
5. Retrospective assessment, reconstruct mental state from records

---

### 2.5 RPwD Act 2016

**Frequency:** Moderate, entered exam cycle since 2017. Likely to increase as Act becomes more established.

**Question formats seen:**

- "Write a short note on the Rights of Persons with Disabilities Act 2016." (5 marks)
- "What are the categories of disability under RPwD Act 2016?" (5 marks)
- "Compare RPwD Act 2016 with the Persons with Disabilities Act 1995." (5–10 marks)

**High-yield points:**

1. 21 disabilities (vs 7 in 1995 Act)
2. Benchmark disability, 40%
3. 4% reservation in government employment
4. Limited guardianship (replacing plenary)
5. UDID card
6. Psychiatric disabilities included: mental illness, ID, ASD, SLD

---

### 2.6 Violence Risk Assessment

**Frequency:** Moderate and increasing. HCR-20 is the most tested instrument.

**Question formats seen:**

- "Write a short note on violence risk assessment." (5 marks)
- "Describe the HCR-20." (5 marks)
- "What are the risk factors for violence in mentally ill patients?" (5–10 marks)

**High-yield points:**

1. Three approaches: unstructured clinical, actuarial, SPJ
2. HCR-20: 20 items, 3 subscales (H-10, C-5, R-5), SPJ instrument
3. Best single predictor: prior violence history
4. MacArthur study findings (mental illness alone does not increase violence risk)
5. Static vs dynamic risk factors

---

### 2.7 Informed Consent

**Frequency:** Moderate. Often integrated into ethics or clinical questions.

**Question formats seen:**

- "Write a short note on informed consent in psychiatry." (5 marks)
- "What are the elements of valid consent?" (5 marks)

- "How would you assess capacity to consent in a patient with schizophrenia?" (5–10 marks)

**High-yield points:**

1. Five elements: Disclosure, Voluntariness, Comprehension, Capacity, Decision (DVCCD)
2. MacArthur capacity model: UARE
3. Capacity vs competence
4. Substitute decision-making under MHCA 2017
5. Therapeutic privilege, definition and limitations

---

## 2.8 Malingering

**Frequency:** Moderate. Reliable short note topic.

**Question formats seen:**

- "Write a short note on malingering." (5 marks)
- "Differentiate malingering from factitious disorder and conversion disorder." (5 marks)
- "What are the tests used to detect malingering?" (5 marks)

**High-yield points:**

1. Definition, intentional, external motivation
2. Distinction from factitious (intentional, internal motivation) and conversion (unintentional)
3. TOMM, memory malingering (chance = 25/50)
4. SIRS-2, gold standard for psychiatric symptom feigning
5. DISCO red flags mnemonic

---

## 2.9 NDPS Act 1985

**Frequency:** Moderate. Often asked as short note.

**Question formats seen:**

- "Write a short note on NDPS Act 1985." (5 marks)
- "What are the provisions of NDPS Act relevant to psychiatry?" (5 marks)
- "Write a short note on Section 64A NDPS Act." (5 marks)

**High-yield points:**

1. Schedule I (narcotics) vs Schedule II (psychotropics)
2. Section 64A, immunity for addicts seeking treatment
3. Small vs commercial quantity, substance-specific
4. Death penalty (Section 31A) for repeat commercial offense

5. 2014 amendment, palliative care access

## SECTION 3: QUESTION FORMAT FREQUENCY

| FORMAT | TYPICAL MARKS | FORENSIC TOPICS TYPICALLY ASKED THIS WAY |
|---|---|---|
| **Long answer / essay** | 10–15 marks | MHCA 2017 overview; McNaughton + limitations; fitness to stand trial (10m) |
| **Comparative long answer** | 10–15 marks | MHCA 2017 vs MHA 1987; Section 84 vs diminished responsibility |
| **Short note** | 5 marks | Advance directives; MHRB; Section 115; testamentary capacity; HCR-20; NDPS 64A; malingering; RPwD 2016 |
| **Vignette / applied** | 5–10 marks | Capacity assessment in a patient with dementia; fitness to stand trial in psychosis |

> **EXAM STRATEGY**
>
> In Paper III, forensic is reliably 1 long answer (10–15 marks) + 2–3 short notes (5 marks each). That is potentially 25–30 marks from this chapter. Forensic is worth more marks per hour of revision than most other Paper III topics.

## SECTION 4: PREDICTED HIGH-YIELD TOPICS FOR 2026 EXAM

Based on recent legislative changes, curriculum updates, and question frequency trends:

| TOPIC | WHY PREDICTED | PRIORITY |
|---|---|---|
| **MHCA 2017, Section 115 as standalone** | Increasingly isolated as examiners test specific sections | **HIGH** |
| **MHCA 2017 vs MHA 1987** | Classic comparative, never goes away | **HIGH** |
| **BNS 2023 replacement of IPC, Section 22 BNS** | New code since 2023; examiners likely to test updated numbering | **HIGH** |
| **RPwD 2016, 21 disabilities** | Under-tested relative to importance | **MODERATE–HIGH** |
| **Violence risk assessment (HCR-20)** | Increasing emphasis on forensic assessment skills | **MODERATE–HIGH** |

| TOPIC | WHY PREDICTED | PRIORITY |
|---|---|---|
| **Malingering vs factitious vs conversion** | Clinical distinction; repeated in question banks | **MODERATE** |
| **NDPS Act, Section 64A** | Increasing relevance with addiction psychiatry emphasis | **MODERATE** |
| **Advance directives, practical application** | Examinees often know the concept but not the process | **MODERATE** |
| **Forensic report writing structure** | Practical skill question; rarely asked but valuable | **MODERATE** |

> **EXAM PEARL**
>
> The BNS 2023 replaces IPC 1860 and CrPC 1973 (now BNSS 2023). Know the new section numbers: Section 84 IPC → Section 22 BNS; Section 85 IPC → Section 23 BNS; Section 86 IPC → Section 24 BNS; Section 328–330 CrPC → Sections 368–370 BNSS.

## SECTION 5: MARKS-PER-TOPIC EFFICIENCY TABLE

*Estimated time to prepare vs likely exam yield*

| TOPIC | PREP TIME NEEDED | EXPECTED EXAM MARKS | EFFICIENCY |
|---|---|---|---|
| **MHCA 2017 core (rights + admission + Section 115 + MHRB)** | 3–4 hours | 10–15 marks | High |
| **McNaughton Rules + Section 84/BNS 22** | 2–3 hours | 10–15 marks | High |
| **Fitness to stand trial** | 1 hour | 5 marks | High |
| **Testamentary capacity** | 1 hour | 5 marks | High |
| **MHCA 2017 vs MHA 1987 (comparative table)** | 1–2 hours | 10 marks | High |
| **Advance directives** | 45 min | 5 marks | High |
| **RPwD Act 2016** | 1.5 hours | 5 marks | Moderate |
| **HCR-20 / violence risk** | 1.5 hours | 5 marks | Moderate |
| **Informed consent + capacity** | 1 hour | 5 marks | Moderate |
| **Malingering** | 1 hour | 5 marks | Moderate |

| TOPIC | PREP TIME NEEDED | EXPECTED EXAM MARKS | EFFICIENCY |
|---|---|---|---|
| **NDPS Act** | 45 min | 5 marks | Moderate |
| **Forensic report structure** | 30 min | 5 marks | Moderate |

**Total estimated prep time:** ~15–18 hours for full forensic coverage

**Expected yield:** 30–45 marks across Paper III

## SECTION 6: COMMONLY CONFUSED PAIRS: EXAM TRAPS

CONFUSION · CORRECT DISTINCTION

**MHCA 2017 in force vs enacted** Enacted 7 April 2017; **in force 29 May 2018**

**Section 115 MHCA vs repeal of Section 309 IPC** Section 309 IPC (now BNS 226) still exists; Section 115 creates a **presumption**, not a repeal

**Fitness to stand trial vs insanity defense** Fitness = **present** capacity; insanity = **past** mental state

**Supported vs emergency admission** Supported requires MHRB within 7 days; emergency = 72-hour window only

**RPwD covers 21 disabilities vs 1995 Act 7 disabilities** 21 (2016 Act) vs 7 (1995 Act), know both numbers

**Benchmark disability = 40% vs any disability** **40% or more** = benchmark (for reservation/benefits)

**TOMM detects memory malingering vs psychiatric** TOMM = **memory**; SIRS-2 = **psychiatric symptom** feigning

**Malingering = mental disorder vs V code** Malingering is a **V code**, NOT a mental disorder in DSM-5

**Diminished responsibility in India** India does **NOT** have diminished responsibility, mental illness can only mitigate sentencing

**McNaughton irresistible impulse, recognized in India?** **Not recognized** in India

**Expert witness duty, to court or client?** Duty is to the **court**, not to the retaining party

**Section 64A NDPS, applies to trafficking?** Only applies to **personal use/possession**, not trafficking

*Sources: PG exams MD Psychiatry Paper III past question analysis; Kaplan & Sadock's Synopsis of Psychiatry (12th ed.); Uday Kumar's Forensic Psychiatry; MHCA 2017; BNS 2023.*

# Quick Review

**Format:** Each Q&A is self-contained. Answers are concise, enough to write 3–5 lines in an exam. Badges indicate Bloom level: `[Recall]` `[Application]` `[Analysis]`

---

**Q1.** When did the Mental Healthcare Act 2017 come into force, and what did it replace? `[Recall]`

**Answer:**

MHCA 2017 came into force on **29 May 2018**. It replaced the Mental Health Act 1987, which had been in force since 1993. MHCA 2017 aligns Indian mental health law with the UN Convention on the Rights of Persons with Disabilities (CRPD), which India ratified in 2007.

---

**Q2.** What does Section 115 of the MHCA 2017 state? What is its significance? `[Recall]`

**Answer:**

Section 115 states that any person who attempts to commit suicide shall be **presumed to have severe stress** and shall not be tried or punished under Section 309 IPC (now Section 226 BNS). The government has a duty to provide care, treatment, and rehabilitation. Significance: it is a public health approach to suicide, treats the act as a symptom of distress, not a crime. Note: it does not repeal Section 309 IPC/BNS 226 but creates a rebuttable presumption overriding prosecution.

---

**Q3.** Name the four rights under MHCA 2017 most commonly asked in exams. `[Recall]`

**Answer:**

1. **Section 20**, Right to protection from cruel treatment, including absolute prohibition of chaining
2. **Section 21(4)**, Right to insurance parity (mental health insurance on same basis as physical illness)
3. **Section 23**, Right to confidentiality
4. **Section 26**, Right to legal aid at MHRB hearings

Also critical: Section 18 (access to mental healthcare), Section 19 (community living).

---

**Q4.** What are the three types of admission under MHCA 2017? Give one distinguishing feature of each. `[Recall]`

**Answer:**

1. **Independent (Section 86):** Person has capacity; voluntary; may leave after 24-hour notice
2. **Supported (Sections 87–89):** Person lacks capacity; requires two psychiatric assessments + NR application + MHRB review within 7 days
3. **Emergency (Section 94):** Imminent risk to life; 72-hour window for emergency care; must convert to supported admission or discharge thereafter

---

**Q5.** What is the composition of the Mental Health Review Board (MHRB)? `[Recall]`

**Answer:**

The MHRB is a district-level quasi-judicial body comprising:

- **Chairperson:** District Judge or Judicial Magistrate
- **Member 1:** A psychiatrist
- **Member 2:** A person who has or has had mental illness, OR a family member of such a person (the "lived experience" member)

This composition is a key departure from MHA 1987, the inclusion of a person with lived experience reflects the CRPD's participatory rights model.

---

**Q6.** State the McNaughton Rules in full. `[Recall]`

**Answer:**

To establish a defense on the ground of insanity, the accused must prove that at the time of the act:

1. They were labouring under a **defect of reason**
2. Arising from **disease of the mind**
3. Such that they did not know the **nature and quality of the act** being done
4. OR if they knew the nature of the act, they did not know that **what they were doing was wrong** (morally or legally)

Only ONE of criteria 3 or 4 needs to be proven.

---

**Q7.** How does Section 84 IPC / Section 22 BNS differ from the original McNaughton Rules? `[Analysis]`

**Answer:**

Three key differences:

1. **"Unsoundness of mind"** (Section 84) vs **"disease of the mind"** (McNaughton), the Indian standard is broader and includes conditions beyond psychiatric diagnosis

2. **"Wrong OR contrary to law"**, Section 84 adds "contrary to law" as an alternative, making it a dual test (morally wrong OR legally prohibited)
3. **Explicit temporal requirement**, "at the time of doing it" is made explicit in Section 84, whereas McNaughton implies this

Both share the purely cognitive standard and the all-or-nothing nature of the defense.

---

**Q8.** A 45-year-old man with schizophrenia is charged with homicide. During assessment, he reveals he heard command hallucinations telling him to kill. He understood the act was killing but believed God commanded it and it was therefore righteous. Does he qualify for Section 84/BNS 22 defense? `[Application]`

**Answer:**

Potentially **yes**, this falls under the second limb of Section 84: he knew the nature of the act (knew he was killing) but **did not know it was wrong** because his delusional belief system told him it was divinely commanded and righteous. A belief that an act is divinely ordained can negate knowledge of wrongness even if the nature of the act is understood. However, the psychiatrist must also establish that this delusional belief was present and operative **at the time of the act**, not just at the time of assessment. Evidence of concealment after the act would weaken the defense.

---

**Q9.** What is the difference between fitness to stand trial and the insanity defense? `[Analysis]`

**Answer:**

| | FITNESS TO STAND TRIAL | INSANITY DEFENSE (SECTION 84/BNS 22) |
|---|---|---|
| **Time** | Present | Past (time of offense) |
| **Question** | Can they participate in trial now? | Were they responsible then? |
| **Legal basis** | Sections 368–370 BNSS | Section 22 BNS |
| **If established** | Trial postponed | NGRI verdict |
| **Outcome** | Treatment to restore fitness | Psychiatric detention (S.330 CrPC/BNSS 370) |

---

**Q10.** State the four elements of testamentary capacity (Banks v Goodfellow). `[Recall]`

**Answer:**

To make a valid will, the testator must:

1. Know the **nature of making a will** and its effects

2. Know the **extent of their property** (general nature, not exact value)
3. Know the **natural claims** on their bounty, who would ordinarily inherit
4. NOT be under a **disorder of mind** that poisons their affections, perverts their sense of right, or prevents exercise of natural faculties in disposing of property

All four must be satisfied at the time of making the will.

---

**Q11.** Can a person with Alzheimer's dementia make a valid will? `[Application]`

**Answer:**

**Yes, if they have a lucid interval.** Testamentary capacity is assessed at the **time of making the will**. A person with dementia may have periods of sufficient cognitive clarity to satisfy all four Banks v Goodfellow criteria. A will made during a lucid interval is valid even if the person subsequently deteriorates. The psychiatrist's task in retrospective assessment is to reconstruct the mental state at the time of signing, using contemporaneous clinical records, witness accounts, and collateral information.

---

**Q12.** What are the 21 disability categories under the RPwD Act 2016? Name at least 10. `[Recall]`

**Answer:**

The 21 disabilities are grouped as:

**Physical (6):** Locomotor, Leprosy-cured, Cerebral palsy, Dwarfism, Muscular dystrophy, Acid attack victim

**Sensory (5):** Blindness, Low vision, Deaf, Hard of hearing, Speech/language disability

**Intellectual/Developmental (3):** Intellectual disability, Specific learning disabilities, Autism spectrum disorder

**Mental/Neurological (2):** Mental illness, Chronic neurological conditions (MS, Parkinson's)

**Blood disorders (3):** Haemophilia, Thalassemia, Sickle cell disease

**Other (2):** Multiple disabilities including deafblindness; Any other notified category

---

**Q13.** What is "benchmark disability" under RPwD 2016 and why does it matter? `[Recall]`

**Answer:**

Benchmark disability = disability of **40% or more** as certified by a Medical Board and reflected on the UDID card. It is the threshold for:

- Reservation in government employment (4% of vacancies)
- Reservation in government-funded higher education (5%)
- Access to most government welfare schemes

- Legal presumption of need for reasonable accommodation

Persons with disability below 40% may still receive some benefits but are not entitled to reservation.

---

**Q14.** What are the five elements of informed consent? `[Recall]`

**Answer:**

Using the **DVCCD** framework:

1. **Disclosure**, adequate information about diagnosis, treatment, alternatives, risks, benefits, consequences of refusal
2. **Voluntariness**, free from coercion, undue influence, or duress
3. **Comprehension**, patient actually understands the information disclosed
4. **Capacity**, decision-making capacity to understand, appreciate, reason, and express a choice
5. **Decision**, patient communicates a clear decision

---

**Q15.** How is decision-making capacity assessed using the MacArthur model? `[Recall]`

**Answer:**

The MacArthur model evaluates four abilities (mnemonic **UARE**):

1. **Understand**, comprehend the disclosed information
2. **Appreciate**, recognize how it applies to their own situation (not just abstractly)
3. **Reason**, weigh options and their consequences rationally
4. **Express**, communicate and maintain a consistent choice

Capacity is **task-specific**, a patient may have capacity for one decision but not another. Assessment is clinical, not based on diagnosis or MMSE score alone.

---

**Q16.** What is the difference between malingering and factitious disorder? `[Analysis]`

**Answer:**

| | MALINGERING | FACTITIOUS DISORDER |
|---|---|---|
| **Intentional?** | Yes | Yes |
| **Motivation** | External gain (avoid punishment, money, drugs) | Internal, sick role, medical attention |
| **DSM-5 status** | V code, NOT a mental disorder | Mental disorder (F68.1) |
| **Attitude to discharge** | Eager to leave once goal achieved | May resist discharge; seeks further investigation |

| | MALINGERING | FACTITIOUS DISORDER |
|---|---|---|
| **Forensic relevance** | High | Moderate |

Key insight: both involve intentional production, but the distinction is **why**, external incentive (malingering) vs. internal psychological need (factitious).

---

**Q17.** What is the TOMM and what does a score below 45/50 on Trial 2 indicate? `[Recall]`

**Answer:**

TOMM (Test of Memory Malingering) is a 50-item forced-choice visual recognition task used to detect **effort-related memory impairment** (memory malingering). The patient views target pictures and is asked to identify them from foils.

- **Trial 2 score < 45/50** suggests **poor effort**, not consistent with genuine memory impairment
- **Chance performance = 25/50**, a person with genuine amnesia performs at chance; malingerers often score below chance due to deliberate failure
- TOMM measures **performance validity**, not the presence or absence of memory disorder

---

**Q18.** What is the SIRS-2 and what does it detect? `[Recall]`

**Answer:**

SIRS-2 (Structured Interview of Reported Symptoms, 2nd edition) is the **gold standard** instrument for detecting **feigned psychiatric symptoms** (not cognitive symptoms). It is a structured interview with multiple scales including:

- Rare Symptoms
- Symptom Combinations
- Improbable/Absurd Symptoms
- Blatant Symptoms
- Subtle Symptoms
- Selectivity of Symptoms
- Severity of Symptoms
- Reported vs Observed Symptoms

It distinguishes genuine psychiatric presentation from deliberate symptom exaggeration in forensic contexts.

---

**Q19.** Describe the HCR-20 V3 structure. `[Recall]`

**Answer:**

HCR-20 V3 (Historical Clinical Risk Management-20, Version 3, 2013) is a **Structured Professional Judgment (SPJ)** instrument for violence risk assessment. It contains 20 items across three subscales:

- **H (Historical), 10 items:** Static, past factors including violence history, antisocial behaviour, relationships, employment, substance use, major mental disorder, personality disorder, traumatic experiences, violent attitudes, treatment response
- **C (Clinical), 5 items:** Current factors including insight, violent ideation/intent, symptoms, instability, treatment response
- **R (Risk Management), 5 items:** Future-oriented factors including professional services, living situation, personal support, treatment response, stress/coping

Output: **Low / Moderate / High** risk classification plus a **case formulation** (not just a score).

---

**Q20.** What is Section 64A of the NDPS Act 1985? `[Recall]`

**Answer:**

Section 64A provides **immunity from prosecution** to a person addicted to any narcotic drug or psychotropic substance who **voluntarily submits to treatment** at a government-recognized de-addiction center. The immunity covers personal use and possession, not trafficking or supply. This is the key "treatment over punishment" provision that creates legal space for addicts to seek help without fear of criminal prosecution. OST (opioid substitution therapy) programs operate within this framework.

---

**Q21.** What is the role of the expert witness in court? `[Recall]`

**Answer:**

An expert witness provides **opinion evidence** based on specialized knowledge, distinct from a fact witness who only testifies about direct observations. Key principles:

1. Primary duty is to the **court**, not to the retaining party
2. Must be **objective and impartial**
3. Can testify beyond personal observation (opinions, hypotheticals)
4. Must disclose **limitations and uncertainties** in their opinion
5. Opinion stated to "reasonable degree of medical/psychiatric certainty"
6. Must not advocate beyond what the data supports

Legal basis: Section 45 IEA 1872 / Section 39 Bharatiya Sakshya Adhiniyam.

---

**Q22.** What is the "lucid interval" principle and when is it relevant in forensic psychiatry? `[Application]`

**Answer:**

A lucid interval is a period during which a person with intermittent or fluctuating mental illness has sufficient cognitive clarity and judgment to make a legally valid decision. Relevant in:

1. **Testamentary capacity**, will made during lucid interval is valid even if person has dementia or episodic psychosis
2. **Contractual capacity**, contract made during lucid interval is valid
3. **Matrimonial capacity**, consent given during lucid interval may be valid
4. **Consent to treatment**, valid consent can be obtained during a lucid interval

The psychiatrist must establish that the interval was genuine (not just apparent) by reviewing contemporaneous clinical documentation and collateral accounts.

---

**Q23.** What are the prohibited treatments under Section 97 of MHCA 2017? `[Recall]`

**Answer:**

Section 97 prohibits:

1. **Unmodified ECT**, ECT without general anaesthesia and muscle relaxant is prohibited; only **modified ECT** is permitted
2. **ECT in minors**, requires MHRB approval; not routine
3. **Psychosurgery**, requires free and informed consent of the patient AND approval by MHRB
4. **Sterilization** as a treatment for mental illness, absolutely prohibited

These prohibitions reflect MHCA 2017's rights-based framework and protection against irreversible or high-risk interventions without adequate safeguards.

---

**Q24.** What is the "irresistible impulse" rule and does it apply in India? `[Recall]`

**Answer:**

The irresistible impulse rule holds that a person should not be held criminally responsible if, at the time of the offense, they were unable to **control their behavior** due to mental illness, even if they knew the act was wrong. It addresses volitional (will) impairment rather than cognitive impairment.

**Status in India:** Not recognized. Section 84 IPC / Section 22 BNS is a purely **cognitive** standard. An accused who knew the act was wrong but "could not stop themselves" does not qualify for the insanity defense under Indian law. This is a significant limitation frequently discussed in forensic psychiatry literature.

---

**Q25.** Compare the outcomes of a successful Section 84/BNS 22 defense with a guilty verdict in India. `[Analysis]`

**Answer:**

| | SUCCESSFUL SECTION 84/BNS 22 (NGRI) | GUILTY VERDICT |
|---|---|---|
| **Verdict** | Not Guilty by Reason of Insanity | Guilty |
| **Outcome** | Detention in psychiatric hospital (Section 330 CrPC / BNSS 370) | Prison sentence |
| **Duration** | At government's pleasure, potentially indefinite | Fixed sentence |
| **Review** | Periodic psychiatric review | Parole/remission provisions |
| **Rights** | Subject to MHCA 2017 rights | Prison rules |
| **Ethical issue** | May be detained longer than if convicted | Punitive purpose served |

The NGRI outcome is not freedom, it is indefinite psychiatric detention, which raises serious human rights concerns under CRPD.

---

**Q26.** What are the four types of domestic violence recognized under the PWDV Act 2005? `[Recall]`

**Answer:**

1. **Physical abuse**, assault, battery, use of criminal force, injury to body
2. **Sexual abuse**, any conduct of a sexual nature that abuses, humiliates, or degrades the woman
3. **Verbal and emotional abuse**, insults, ridicule, name-calling, threats, coercion, repeated false accusations, preventing education/employment
4. **Economic abuse**, deprivation of financial resources, preventing woman from taking up employment, disposing of assets, prohibiting access to bank accounts

**Key scope:** PWDV Act covers women in **domestic relationships**, which includes married women, women in live-in relationships, daughters, mothers, and other female family members.

---

**Q27.** What is limited guardianship under RPwD 2016 and how does it differ from plenary guardianship? `[Analysis]`

**Answer:**

**Plenary guardianship** (old model, PDA 1995): Guardian is appointed and the person with disability loses **all** legal capacity, cannot make any decisions independently. Effectively

treats the person as legally non-existent.

**Limited guardianship** (RPwD 2016, Section 14): Guardian is appointed only for **specific, defined decisions**, person retains full legal capacity for all other matters. The arrangement requires the person's consent/support and must be reviewed periodically.

Limited guardianship aligns with **CRPD Article 12** (equal recognition before the law) and the supported decision-making model. It acknowledges that disability-related impairment may be domain-specific, not global.

---

**Q28.** What is the MacArthur Violence Risk Assessment Study's key finding regarding mental illness and violence? `[Recall]`

**Answer:**

The MacArthur Violence Risk Assessment Study (Steadman et al., 1998) found:

1. **Mental illness alone** does NOT significantly increase violence risk compared to the general community
2. **Substance use comorbidity** significantly increases violence risk in persons with mental illness
3. **Specific symptom clusters** matter more than diagnosis, particularly **threat/control-override symptoms** (delusions that others are trying to harm you; feeling controlled by external forces)
4. Persons with mental illness who do not abuse substances have violence rates similar to neighbors without mental illness

Clinical implication: Violence risk assessment should target comorbid substance use and specific symptom profiles, not diagnosis alone.

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**Q29.** A 68-year-old retired professor with mild Alzheimer's dementia (MMSE 22/30) wants to sign a new will disinheriting his son and leaving everything to a recent acquaintance. His family contests. How would you approach a capacity assessment? `[Application]`

**Answer:**

This is a retrospective or prospective testamentary capacity assessment in dementia. Steps:

1. **Do not rely on MMSE alone**, MMSE 22 is borderline; capacity is decision-specific, not score-dependent
2. **Assess the four Banks v Goodfellow elements:**
3. Does he understand what a will is and what it does?
4. Can he describe the extent of his estate (property, assets)?
5. Does he know who would naturally inherit (son, family)?

6. Is his decision to disinherit driven by an insane delusion (e.g., persecutory delusion that his son is trying to harm him), or is it a rational, if unusual, personal choice?
7. **Key question:** Is the disinheritance the product of an **insane delusion** (vitiates element 4) or a competent if idiosyncratic preference?
8. **Document:** Use MacCAT-T or HCAT, detailed MSE, clinical record review
9. **Consider:** Was a lucid interval present? Who is the "recent acquaintance", is there evidence of undue influence?

If the disinheritance is driven by dementia-related paranoid delusions about the son, element 4 fails and capacity is absent. If it reflects a longstanding rational preference, capacity may be intact.

---

**Q30.** What are the key differences between small quantity and commercial quantity under NDPS Act, and what are the penalties? `[Recall]`

**Answer:**

Quantities are **substance-specific** and notified by the Central Government.

**Example quantities for heroin:**

- Small quantity: 5 grams
- Commercial quantity: 250 grams

**Penalties:**

| QUANTITY | OFFENSE | PENALTY |
|---|---|---|
| **Small** | Possession/use | Rigorous imprisonment up to 1 year + fine |
| **Between small and commercial** | Possession/use | Up to 10 years + fine up to Rs. 1 lakh |
| **Commercial** | Possession/manufacture/sale | 10–20 years rigorous imprisonment + fine ≥ Rs. 1–2 lakh |
| **Commercial (repeat)** | Any offense | **Death penalty** (Section 31A) |

**Section 64A exception:** Personal possession by an addict who voluntarily seeks treatment = immune from prosecution regardless of quantity (for personal use only, not supply).

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## TOPIC COVERAGE SUMMARY

DOMAIN · QUESTIONS

**MHCA 2017 provisions** Q1, Q2, Q3, Q4, Q5, Q23

**McNaughton / Section 84 / BNS 22** Q6, Q7, Q8, Q24, Q25

**Fitness to stand trial** Q9

**Testamentary capacity** Q10, Q11, Q22, Q29

**RPwD Act 2016** Q12, Q13, Q27

**Informed consent / capacity** Q14, Q15

**Malingering** Q16, Q17, Q18

**Violence risk / HCR-20** Q19, Q28

**NDPS Act** Q20, Q30

**Forensic report / expert witness** Q21

**Civil capacity** Q22, Q29

**Domestic violence / PWDV Act** Q26

**Comparison / analysis** Q7, Q9, Q16, Q25, Q27

*Sources: Kaplan & Sadock's Synopsis of Psychiatry (12th ed.); Uday Kumar's Forensic Psychiatry; MHCA 2017; BNS 2023; RPwD Act 2016; NDPS Act 1985; PWDV Act 2005.*

GUIDE 14 · PART III

# ECT Special Topics

*Paper III · Specialties, Forensic & Child. Six study modes, from notes to quick review.*

CHAPTER 01 · ECT SPECIAL TOPICS

# Study Notes

**Sources:** Kaplan & Sadock's Synopsis of Psychiatry (12th ed.), Stahl's Essential Psychopharmacology (5th ed.), APA Task Force on ECT (3rd ed.), MHCA 2017, Telemedicine Practice Guidelines 2020 (MoHFW), PG exams ECT Standards

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## SECTION 1: ELECTROCONVULSIVE THERAPY (ECT)

### 1.1 Historical Context

ECT was introduced by Ugo Cerletti and Lucio Bini in Rome in 1938. The original theoretical basis (now discredited) was that epilepsy and schizophrenia were biologically incompatible. Prior to electrical induction, camphor and later pentylenetetrazol (Metrazol) were used to induce seizures. ECT remains one of the most effective and fastest-acting treatments in psychiatry, with response rates of 70–90% in severe depression.

> **EXAM PEARL**
> Cerletti and Bini introduced ECT in 1938. The camphor seizure method preceded it (von Meduna, 1934). The "incompatibility hypothesis" was the original (wrong) rationale.

---

### 1.2 Mechanism of Action

The precise mechanism remains under active investigation. Multiple complementary hypotheses exist:

#### 1.2.1 ANTICONVULSANT THEORY

- ECT raises seizure threshold over the course of treatment (the "anticonvulsant" effect)
- This parallels the mechanism of action of anticonvulsant mood stabilizers
- Increased inhibitory GABAergic activity post-ECT
- Reduction in ictal EEG complexity correlates with therapeutic response
- Supporting evidence: seizure threshold rises, ictal duration shortens across sessions

#### 1.2.2 NEUROTROPHIC / NEUROPLASTICITY THEORY

- ECT increases Brain-Derived Neurotrophic Factor (BDNF), particularly in hippocampus and prefrontal cortex
- Stimulates neurogenesis in dentate gyrus (hippocampal neurogenesis)
- Upregulation of VEGF (vascular endothelial growth factor) and FGF (fibroblast growth factor)
- This reverses hippocampal volume loss seen in chronic depression

- May explain why cognitive effects are paradoxically less severe than feared, new neurons are generated

> **EXAM PEARL**
> ECT increases BDNF and promotes hippocampal neurogenesis. This is the same pathway antidepressants use, but ECT does it faster and more robustly.

#### 1.2.3 MONOAMINE HYPOTHESIS

- Acute seizures produce massive release of norepinephrine, dopamine, and serotonin
- Downregulation of beta-adrenergic and 5-HT2 receptors after repeated ECT (similar to antidepressants)
- Dopaminergic enhancement may explain antimanic and antipsychotic effects
- ECT also increases dopamine receptor sensitivity in nigrostriatal pathways, relevant in NMS treatment

#### 1.2.4 NEUROENDOCRINE THEORY

- ECT normalizes HPA axis hyperactivity
- Reduction in CSF CRH (corticotropin-releasing hormone) levels
- Normalizes dexamethasone suppression test (DST) results in melancholic depression

#### 1.2.5 ANTICONVULSANT THEORY (ADVANCED)

- Increased enkephalin and endorphin release post-seizure
- Elevated adenosine (an endogenous anticonvulsant) may mediate postictal suppression
- Post-ictal EEG suppression amplitude correlates with therapeutic efficacy

#### 1.2.6 NEUROINFLAMMATORY / IMMUNOMODULATORY THEORY (EMERGING)

- ECT reduces pro-inflammatory cytokines (IL-6, TNF-alpha, CRP) in depressed patients
- May be particularly relevant in "immunological" subtypes of depression
- Emerging research links depression severity to neuroinflammatory markers

> **CLINICAL ANCHOR**
> No single mechanism explains ECT's effects. The current consensus is that ECT is a potent neuromodulator affecting multiple systems simultaneously, this is why it works when drugs fail.

---

## 1.3 Indications for ECT

#### 1.3.1 PRIMARY / FIRST-LINE INDICATIONS

These are conditions where ECT is appropriate as a first-choice treatment, not just a "last resort":

| INDICATION · RATIONALE | |
|---|---|
| **Severe major depressive episode with psychotic features** | Response rate >85%; medications work slowly |
| **Suicidal emergency requiring rapid response** | ECT works in days; medications take weeks |
| **Severe catatonia (not responding to lorazepam)** | ECT is definitive treatment |
| **Acute mania with severe psychomotor agitation** | When pharmacotherapy is insufficient or dangerous |
| **Neuroleptic Malignant Syndrome (NMS)** | After stabilization; addresses dopaminergic dysregulation |
| **Malignant catatonia** | Diagnostic overlap with NMS; ECT effective in both |
| **Parkinson's disease with severe motor fluctuations** | Dopaminergic boost |

### 1.3.2 SECONDARY INDICATIONS (AFTER FAILED PHARMACOTHERAPY)

- Treatment-resistant depression (failed 2+ adequate medication trials)
- Bipolar depression (treatment-resistant)
- Schizoaffective disorder with prominent affective symptoms
- Schizophrenia (predominantly for affective and catatonic features)
- Obsessive-compulsive disorder (refractory, limited evidence)
- Status epilepticus (refractory, paradoxically, ECT raises seizure threshold)

> **EXAM PEARL**
>
> "First-line" ECT is justified when: (1) speed of response is critical (suicidality, food refusal, severe medical compromise); (2) pharmacotherapy carries higher risk (pregnancy); (3) prior ECT response was better than medication response; (4) patient preference.

### 1.3.3 ECT IN SPECIAL CLINICAL SCENARIOS

- **Pregnancy:** ECT is the preferred treatment for severe depression/psychosis in first trimester; safer than most psychotropics for the fetus; requires obstetric monitoring, left lateral decubitus positioning, fetal heart rate monitoring
- **Elderly:** Generally well-tolerated; lower stimulus doses; higher cognitive monitoring; may need more spaced sessions
- **Parkinson's disease:** ECT improves both mood and motor symptoms; "on-off" fluctuations respond
- **Post-stroke depression:** ECT effective; requires cardiac and neurological clearance
- **HIV/CNS infections:** Relative caution; increased cognitive risk

## 1.4 Contraindications to ECT

### 1.4.1 ABSOLUTE CONTRAINDICATIONS (VERY FEW)

There are **no absolute contraindications** in the strict sense, the APA recognizes only conditions requiring extreme caution. However, examiners expect these to be known:

- **Pheochromocytoma**, catecholamine surge during ECT can be fatal
- **Raised intracranial pressure (ICP)**, seizure further increases ICP; risk of herniation

> EXAM PEARL
> Pheochromocytoma and raised ICP are the two conditions universally cited as absolute contraindications. Everything else is relative.

### 1.4.2 RELATIVE CONTRAINDICATIONS (RISK-BENEFIT ASSESSMENT REQUIRED)

- Recent myocardial infarction (within 3 months), increased cardiac risk
- Unstable angina / significant arrhythmias
- Aortic or cerebral aneurysm, rupture risk during BP surge
- Recent stroke (within 3 months), may worsen neurological deficit
- Severe osteoporosis, fracture risk (use adequate muscle relaxant)
- Retinal detachment
- Active pulmonary infection / respiratory compromise
- Space-occupying intracranial lesion (not all, depends on mass effect)
- Anticoagulation (can be managed)

---

## 1.5 Pre-ECT Workup

### 1.5.1 CLINICAL ASSESSMENT

- Detailed psychiatric history confirming indication
- Medical and anesthetic history (prior ECT, complications)
- Medication review (see below)
- Cognitive baseline assessment (Mini-Mental State Examination or similar)
- Consent discussion (see Section 1.10)

### 1.5.2 INVESTIGATIONS

| INVESTIGATION · PURPOSE | |
|---|---|
| **CBC (Complete Blood Count)** | Anemia, infection, thrombocytopenia |
| **Blood glucose** | Hypoglycemia risk with fasting |

**Serum electrolytes (Na+, K+)** Electrolyte abnormalities affect seizure threshold and cardiac rhythm

**Renal function (BUN, creatinine)** Drug clearance

**Liver function tests** Drug metabolism

**ECG (12-lead)** Baseline cardiac rhythm; arrhythmia screening

**Chest X-ray** Pulmonary/cardiac baseline

**Spine X-ray (lumbar/cervical)** Osteoporosis, fracture risk, especially elderly

**EEG (optional)** Baseline seizure activity; rarely mandated

**Brain imaging (CT/MRI)** If space-occupying lesion suspected; not routine

**Dental assessment** Loose teeth risk (bite block)

**Anesthesia evaluation** Airway, fitness for GA

### 1.5.3 MEDICATION MANAGEMENT PRE-ECT

DRUG · ACTION BEFORE ECT

**Lithium** Withhold or reduce, increases neurotoxicity and cognitive side effects

**Benzodiazepines** Taper and withhold, raise seizure threshold, impair seizure adequacy

**Anticonvulsants** Reduce/withhold if possible, raise seizure threshold

**MAOIs** Withhold 2 weeks (interaction with anesthetics and succinylcholine)

**Theophylline** Stop, lowers seizure threshold unpredictably, may cause status epilepticus

**TCAs** Continue with caution, may lower seizure threshold; cardiac monitoring essential

**Antipsychotics** Generally continue; some lower seizure threshold

**SSRIs/SNRIs** Continue, minimal interaction

**Beta-blockers** Continue, may need dose for tachycardia management

**Antihypertensives** Continue, manage BP surges

**Aspirin/warfarin** Manage; not absolute contraindication

**Metformin** Withhold on day of ECT, lactic acidosis risk with GA fasting

> **EXAM PEARL**
>
> BLAST mnemonic for drugs to withhold/modify before ECT: **B**enzodiazepines, **L**ithium, **A**nticonvulsants, **S**uccinylcholine interactions (MAOIs), **T**heophylline.

## 1.6 ECT Procedure: Step-by-Step

### 1.6.1 PRE-PROCEDURE PREPARATION

- NPO (nil per os) for minimum 6–8 hours (solid food), 4 hours (clear liquids), per anesthesia protocol
- IV access established
- Vital signs baseline
- Glycopyrrolate (anticholinergic), 0.2 mg IV, to reduce secretions and bradycardia
- Alternative: atropine 0.3–0.6 mg IV/IM (less preferred due to tachycardia)
- EEG electrodes applied (bitemporal and vertex monitoring electrodes)
- Blood pressure cuff on ankle (isolated limb technique, see below)
- Pulse oximetry, ECG monitoring
- Bite block prepared

### 1.6.2 ANESTHESIA

**Induction Agents:**

| AGENT | DOSE | ADVANTAGES | DISADVANTAGES |
|---|---|---|---|
| **Thiopentone (thiopental)** | 2–4 mg/kg IV | Gold standard; minimal effect on seizure threshold; rapid onset | Cardiovascular depression; not available everywhere |
| **Propofol** | 1–2 mg/kg IV | Antiemetic; smoother recovery; widely available | Raises seizure threshold (shortens seizure); needs higher ECT dose |
| **Methohexital** | 0.75–1 mg/kg | Lowers seizure threshold (preferred in USA) | Not available in India |
| **Ketamine** | 1–2 mg/kg | Antidepressant properties; lowers seizure threshold | Psychotomimetic effects; tachycardia |
| **Etomidate** | 0.2–0.3 mg/kg | Minimal hemodynamic effects | Myoclonus; adrenal suppression |

> **EXAM PEARL**
>
> In India, **thiopentone** (thiopental sodium) is the traditional agent. **Propofol** is increasingly used. Methohexital is the American gold standard but unavailable in India. Remember propofol raises seizure threshold.

**Muscle Relaxant:**

- **Succinylcholine (suxamethonium):** 0.5–1.5 mg/kg IV
- Depolarizing neuromuscular blocker
- Onset: 30–60 seconds
- Duration: 5–10 minutes
- Allows modified ECT (prevents fractures, muscle injuries)
- Contraindicated in: pseudocholinesterase deficiency, hyperkalemia (burns, crush injuries), history of malignant hyperthermia, denervation injuries
- Alternative: Rocuronium (non-depolarizing; reversed with sugammadex)

**Oxygenation:**

- 100% oxygen via bag-mask ventilation before and after stimulus
- Hyperventilation (5–10 deep breaths), lowers seizure threshold by inducing hypocapnia

### 1.6.3 ELECTRODE PLACEMENT

| PLACEMENT | DESCRIPTION | ADVANTAGES | DISADVANTAGES |
|---|---|---|---|
| **Bilateral (BL) / Bitemporal** | Electrodes over both temporal regions | Highest efficacy; fastest response; fewer missed seizures | Most cognitive side effects |
| **Right Unilateral (RUL)** | One electrode on right temple, one on vertex (d'Elia position) | Less cognitive side effects (non-dominant hemisphere) | Needs 6x seizure threshold for efficacy; less effective at low doses |
| **Bifrontal** | Electrodes over both frontal regions | Intermediate cognitive risk; good efficacy | Less studied than BL or RUL |
| **Left Unilateral** | Over left (dominant) hemisphere | Rarely used | More cognitive effects than RUL |

> **EXAM PEARL**
>
> RUL ECT must be delivered at **6x seizure threshold** to match bilateral ECT efficacy. At lower doses, RUL is inferior to bilateral. This "dose-response" relationship is critical.

**d'Elia Placement (RUL):** One electrode 3 cm above the midpoint of the right zygoma and orbital ridge (temporal); second electrode 3 cm to the right of the vertex.

**Lancaster Position (Bilateral):** Electrodes 3–4 cm above the midpoint of a line joining the external canthus and external auditory meatus, bilaterally.

### 1.6.4 ISOLATED LIMB TECHNIQUE (MOTOR SEIZURE MONITORING)

- A blood pressure cuff is inflated above systolic pressure on one forearm or ankle BEFORE succinylcholine injection
- Succinylcholine cannot reach that limb, muscles in the isolated limb contract during the seizure
- This allows direct visualization of motor seizure duration and generalization
- Minimum adequate motor seizure: **25 seconds**

### 1.6.5 STIMULUS DELIVERY AND SEIZURE ADEQUACY

**Electrical Parameters:**

- Modern ECT machines deliver brief-pulse or ultra-brief pulse square-wave stimuli
- Key parameters:
- **Frequency (Hz):** Pulses per second
- **Pulse width (ms):** Duration of each pulse
- **Duration (seconds):** Length of stimulus train
- **Current (amperes, A):** Fixed in most machines (~0.8–0.9 A)
- **Charge (millicoulombs, mC):** Key dosing parameter = Current × Pulse width × Frequency × Duration

**Brief-pulse vs Ultra-brief pulse:**

| FEATURE | BRIEF-PULSE | ULTRA-BRIEF PULSE |
|---|---|---|
| **Pulse width** | 0.5–2.0 ms | 0.2–0.3 ms (≤0.5 ms) |
| **Efficacy** | Higher | Slightly lower (particularly for depression) |
| **Cognitive side effects** | More | Significantly less |
| **Requires** | Standard dosing | Higher stimulus intensity to induce seizure |
| **Best for** | Bilateral ECT; acute severe illness | RUL ECT; cognitive preservation important |

> **EXAM PEARL**
> Ultra-brief pulse ECT has significantly fewer cognitive side effects, especially with RUL placement. The combination of **ultra-brief pulse + RUL** has the least cognitive burden.

**Seizure Threshold Determination:**

- **Titration method:** Start below estimated threshold; increase in steps until seizure achieved. Seizure threshold established on first session; subsequent sessions dosed relative to threshold (bilateral: 1.5–2x threshold; RUL: 6x threshold)
- **Fixed-dose method:** Use age-based formula (age/2 = approximate threshold in % for Mecta machines) or a fixed empirical dose
- Advantages of titration: more precise dosing, individualized; reduces cognitive risk
- Disadvantages: requires extra session (first session may be subtherapeutic)

**Seizure Adequacy Criteria:**

| CRITERION · THRESHOLD FOR ADEQUACY | |
|---|---|
| **Motor (isolated limb)** | ≥25 seconds |
| **EEG seizure duration** | ≥20–25 seconds |
| **EEG postictal suppression** | High-amplitude delta activity followed by flat line indicates good seizure |
| **Concordance** | Motor AND EEG both adequate |

**Signs of Inadequate Seizure:**

- Short duration (<20 seconds EEG; <25 seconds motor)
- Failure to generalize (focal, not bilateral tonic-clonic)
- No postictal suppression on EEG
- Management: re-stimulate within same session (up to 3 attempts); increase stimulus energy; consider hyperventilation; consider switching anesthetic agent

**Missed Seizure Management:**

1. Wait 20 seconds, sometimes seizure is delayed
2. Hyperventilate patient (5 breaths)
3. Restimulate at higher energy (increment 25–50%)
4. Re-oxygenate fully before restimulation
5. If still no seizure after 3 attempts: abort session, review medications (benzodiazepines?), plan next session with different anesthesia

---

## 1.7 Course of ECT

### 1.7.1 STANDARD ACUTE COURSE

- **Frequency:** 3 sessions/week (Monday-Wednesday-Friday in most centers)
- **Number of sessions:** Typically 6–12 sessions for depression; 8–20 for schizophrenia
- **Assessment:** Patient reassessed after every 3–4 sessions

- **Response criteria:** ≥50% reduction in Hamilton Depression Rating Scale (HDRS) or Montgomery-Asberg scores
- **Remission criteria:** Score below threshold on rating scale + clinical confirmation
- **Continuation:** Once remission achieved, continue 2–6 more sessions to consolidate

#### 1.7.2 MAINTENANCE ECT (M-ECT)

- Indicated for: patients with high relapse rate, multiple prior episodes, inadequate response to pharmacotherapy alone, patient preference
- Schedule (tapering): weekly x 4 weeks → fortnightly x 4 → monthly (indefinitely in some cases)
- Combination with pharmacotherapy recommended
- Cognitive monitoring essential
- MHCA 2017 considerations: requires ongoing consent

> **EXAM PEARL**
> Maintenance ECT is evidence-based for relapse prevention in treatment-resistant depression and bipolar disorder. It is not "experimental."

---

## 1.8 Side Effects of ECT

#### 1.8.1 COGNITIVE SIDE EFFECTS (MOST CLINICALLY SIGNIFICANT)

**Acute Confusional State (Post-ictal):**

- Present immediately after each session
- Duration: 15–60 minutes typically
- Features: disorientation, confusion, agitation
- Management: reassurance, reorientation, quiet environment; rarely haloperidol 0.5–1 mg

**Anterograde Amnesia:**

- Inability to form new memories during ECT course
- Present during acute treatment course
- Usually resolves within weeks of completing ECT
- Less severe with RUL and ultra-brief pulse

**Retrograde Amnesia:**

- Loss of memories from the period surrounding ECT
- Most prominent for autobiographical events around the time of treatment
- Can extend months to years prior (especially with bilateral ECT)
- Personal memories more affected than semantic memories

- Partial recovery occurs over weeks to months; some permanent loss possible
- More severe with: bilateral placement, high-dose, sine-wave (not used now), many sessions

**Objective Cognitive Testing:**

- Executive function and processing speed may be transiently impaired
- Verbal memory most affected
- Visuospatial memory less affected
- Global cognitive function (MMSE) usually preserved

> **EXAM PEARL**
>
> Patients often report subjective memory complaints even when objective testing is normal. Address this with validation and explanation. Bilateral ECT causes more retrograde amnesia than RUL.

**Strategies to Minimize Cognitive Side Effects:**

1. Use RUL instead of bilateral placement where possible
2. Use ultra-brief pulse width
3. Use minimum effective stimulus dose
4. Space sessions (2x/week instead of 3x)
5. Use propofol or methohexital (but consider seizure threshold effects)
6. Monitor with serial cognitive testing (MMSE, Hopkins Verbal Learning Test)
7. Treat contributing factors (hypothyroidism, nutritional deficiencies)

### 1.8.2 CARDIOVASCULAR EFFECTS

- **Parasympathetic phase (0–10 seconds):** Bradycardia, can cause asystole (prevented by anticholinergic premedication)
- **Sympathetic phase (during/after seizure):** Tachycardia, hypertension, can be marked
- Management: beta-blockers (esmolol, labetalol) for hypertension/tachycardia
- Nitrates for hypertensive emergency
- Post-ictal bradycardia may occur
- ECG changes: ST changes, PVCs (usually transient)

### 1.8.3 OTHER SIDE EFFECTS

| SIDE EFFECT | PREVALENCE | MANAGEMENT |
|---|---|---|
| Headache | 45% | Paracetamol/NSAIDs post-ECT |

| SIDE EFFECT | PREVALENCE | MANAGEMENT |
|---|---|---|
| **Myalgia (muscle aches)** | 10–20% | Succinylcholine related; adequate dose reduces it |
| **Nausea/vomiting** | 20–30% | Ondansetron/metoclopramide; propofol reduces it |
| **Prolonged seizure (>3 min)** | Rare | IV benzodiazepine (diazepam/lorazepam); thiopentone |
| **Status epilepticus** | Very rare | Full status epilepticus protocol |
| **Tardive seizure (hours later)** | Rare | Monitor; investigate CNS pathology |
| **Dental/oral injury** | Rare | Adequate bite block; pre-ECT dental assessment |
| **Aspiration** | Rare | NPO protocol; adequate oxygenation |
| **Fractures** | Historical | Prevented by succinylcholine; check osteoporosis pre-ECT |
| **Death** | ~1 per 73,000–100,000 treatments | Lower than anesthesia risk for minor surgery |

**EXAM PEARL**

ECT mortality is approximately 1 per 73,440 treatments (APA Task Force data). This is comparable to the risk of general anesthesia for minor procedures. Lower than untreated severe depression mortality.

## 1.9 Modified vs Unmodified ECT

| FEATURE | MODIFIED ECT | UNMODIFIED ECT |
|---|---|---|
| **General anesthesia** | Yes | No |
| **Muscle relaxant** | Yes (succinylcholine) | No |
| **Oxygenation** | 100% O2 | None |
| **Visible motor seizure** | Minimal (bite block, toe) | Full tonic-clonic |
| **Fracture risk** | Negligible | Significant (compression fractures, dislocations) |
| **Use in India** | Standard | Practiced in some low-resource settings |

| FEATURE | MODIFIED ECT | UNMODIFIED ECT |
|---|---|---|
| MHCA 2017 | Only modified ECT recommended | Not prohibited but not recommended |
| Monitoring | EEG + isolated limb | Motor seizure only |

> **EXAM PEARL**
> MHCA 2017 does not explicitly ban unmodified ECT but mandates that ECT be given in a safe, humane manner with appropriate safeguards, which practically means modified ECT. Unmodified ECT without anesthesia may be considered a violation of the Act's spirit.

---

## 1.10 Consent for ECT Under MHCA 2017

### 1.10.1 SECTIONS 94–95 OF MHCA 2017

**Section 94, Consent for ECT (Adults with Mental Illness):**

- ECT must not be administered without **informed consent** from the patient
- Patient must have **decision-making capacity** (DMC) at the time of consent
- If patient lacks DMC: consent from **nominated representative** + opinion of a **second psychiatrist**
- If no nominated representative: seek consent from **any relative** as defined in the Act
- Emergency exception: ECT may be given in a life-threatening emergency after a second psychiatrist certifies it is necessary to prevent immediate risk to life
- **Emergency ECT without consent:** Permissible only when: (a) life is at immediate risk; (b) a second psychiatrist certifies; (c) documented fully
- After emergency: patient must be informed of what was done and why, as soon as they have capacity

**Section 95, ECT for Minors (Under 18):**

- **ECT is prohibited for persons under 18 years of age under MHCA 2017**
- No exception for emergencies in minors
- This is one of the few absolute prohibitions in the Act

> **EXAM PEARL**
> MHCA 2017 Section 95: ECT is **banned for all persons under 18**. This is a HIGH-YIELD exam point. There are no exceptions.

### 1.10.2 CONSENT PROCESS (PRACTICAL)

- Written informed consent (MHCA Form)

- Consent given after patient understands: what ECT is, why it is recommended, likely benefits and risks, alternatives, right to withdraw consent at any time
- Consent should be re-affirmed before each session (especially if patient's capacity has fluctuated)
- Advance Directive (Section 5–11, MHCA) may specify patient's wishes about ECT, must be honored
- Patient has the right to refuse ECT even if it is the best treatment

#### 1.10.3 ECT IN PREGNANCY (CONSENT CONSIDERATIONS)

- Full informed consent from patient
- Obstetric consultation and consent
- Additional consent for fetal monitoring
- Risk-benefit discussion documented: ECT vs untreated severe illness vs pharmacotherapy risks

---

## 1.11 ECT in Special Populations

#### 1.11.1 PREGNANCY

- ECT is preferred over antidepressants/antipsychotics in first trimester for severe illness
- No teratogenic effects documented
- **Risks of ECT in pregnancy:**
- Premature labor (uterine contractions can occur)
- Fetal bradycardia (monitor fetal heart rate)
- Aortocaval compression in late pregnancy (left lateral decubitus)
- Aspiration risk (increased in pregnancy, use antacid premedication)
- Succinylcholine, plasma cholinesterase levels fall in pregnancy; prolonged apnea possible
- **Protocol modifications for pregnancy:**
- Obstetric anesthesiologist present
- Fetal heart rate monitoring (after 16 weeks)
- Tocolytic standby (ritodrine) for premature labor
- Antacid (sodium citrate) premedication
- Left lateral tilt of table
- Intubation if airway concerns
- Use low ECT dose (minimize fetal hypoxia during maternal hyperventilation)
- Uterine contraction monitoring

### 1.11.2 ELDERLY

- ECT generally safe and effective
- Cognitive side effects more pronounced, use RUL, ultra-brief pulse, 2x/week
- Delirium more common post-ECT, shorter sessions between treatments
- Higher anesthesia risk, careful workup
- Drug interactions more likely, extensive medication review
- Higher response rates than in younger patients (particularly for melancholic depression)
- Stimulus dosing: elderly have higher seizure threshold, may need more energy

### 1.11.3 CHILDREN AND ADOLESCENTS

- **Banned under MHCA 2017 (Section 95) for those under 18**
- Despite evidence of efficacy in adolescents globally, Indian law prohibits it
- International perspective (APA, AACAP): ECT can be used in adolescents as a last resort for severe, treatment-resistant illness
- In India: examinees must know the legal prohibition

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## 1.12 Brief-Pulse vs Ultra-Brief Pulse (Detailed)

| FEATURE | SINE-WAVE | BRIEF-PULSE (BP) | ULTRA-BRIEF PULSE (UBP) |
|---|---|---|---|
| **Pulse width** | Continuous | 0.5–2.0 ms | ≤0.3 ms (typically 0.2 ms) |
| **Era** | Historical (1930s–1970s) | 1980s–present standard | Current innovation |
| **Efficacy** | High | High | Slightly lower (esp. bilateral) |
| **Cognitive effects** | Very high | Moderate | Least |
| **Optimal placement** | | Bilateral or RUL | Primarily RUL |
| **Energy needed to reach threshold** | Low | Moderate | Higher (threshold is higher) |
| **Recommended use** | Abandoned | Standard bilateral ECT | Cognitive preservation priority |

> **EXAM PEARL**
>
> Sine-wave ECT is now **abandoned**, caused excessive cognitive side effects with no added efficacy. Brief-pulse is the current standard. Ultra-brief pulse with RUL offers the best cognitive safety profile.

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# SECTION 2: REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (rTMS)

## 2.1 Mechanism of Action

- A rapidly alternating magnetic field is generated by a coil placed over the scalp
- This induces electrical currents in the underlying cortex (Faraday's law of electromagnetic induction)
- Depending on frequency: high-frequency (≥10 Hz) stimulation is excitatory; low-frequency (≤1 Hz) is inhibitory
- Non-invasive: no anesthesia, no seizure, no cognitive side effects
- Does not penetrate deeper than 2–3 cm from skull surface

## 2.2 Standard rTMS Parameters for Depression

PARAMETER · VALUE

| | |
|---|---|
| **Target** | Left dorsolateral prefrontal cortex (DLPFC) |
| **Frequency** | 10 Hz (high-frequency, excitatory) |
| **Intensity** | 120% of resting motor threshold (RMT) |
| **Sessions** | 20–30 sessions over 4–6 weeks |
| **Pulses per session** | 3,000 pulses |
| **Duration** | 37.5 minutes per session |

**Deep TMS (dTMS):**

- Uses H-coil (Brainsway) to reach deeper structures
- FDA-approved for OCD and smoking cessation in addition to depression

## 2.3 Indications for rTMS

- **Treatment-resistant major depression** (failed 1–4 antidepressant trials), FDA approved 2008, NICE approved
- **OCD** (deep TMS with H7 coil), FDA approved 2018
- **PTSD**, emerging evidence
- **Chronic pain**, motor cortex stimulation
- **Schizophrenia**, low-frequency left temporal TMS for auditory hallucinations
- **Bipolar depression**, limited evidence; some guidelines support

> **EXAM PEARL**
> rTMS is NOT equivalent to ECT in efficacy for severe depression. ECT is 2–3x more effective. rTMS is preferred when: cognitive effects of ECT are a concern; patient refuses ECT; or depression is moderate-severe but not life-threatening.

### 2.4 Theta Burst Stimulation (TBS)

- A patterned protocol: bursts of 3 pulses at 50 Hz, repeated at 5 Hz
- **Intermittent TBS (iTBS):** Excitatory, equivalent efficacy to 10 Hz rTMS in 3 minutes (vs 37 minutes)
- **Continuous TBS (cTBS):** Inhibitory
- iTBS is FDA-approved and now widely used, much faster protocol
- Response rates comparable to standard 10 Hz rTMS

### 2.5 Contraindications to rTMS

- Metallic implants in or near head (cochlear implants, deep brain stimulators, metal plates in skull)
- Seizure disorder (relative, can induce seizure)
- Pregnancy (limited data, generally avoided)
- Cardiac pacemaker (not a problem unless in head/neck region)

### 2.6 Side Effects of rTMS

- Headache (most common), usually mild
- Scalp discomfort/pain at coil site
- Facial muscle twitching during stimulation
- Seizure induction, rare (<0.1%); more risk with high-intensity protocols
- No cognitive effects (a key advantage over ECT)
- No systemic effects (no anesthesia)

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## SECTION 3: OTHER BRAIN STIMULATION THERAPIES

### 3.1 Vagus Nerve Stimulation (VNS)

**Type** Invasive, implanted pulse generator (like pacemaker)

**Mechanism** Stimulates left vagus nerve → projects to NTS (nucleus tractus solitarius) → thalamus, limbic cortex

**Indication** Treatment-resistant depression (FDA approved 2005), epilepsy

**Parameters** 0.25–3.5 mA; pulse width 250–500 μs; frequency 20–30 Hz; 30 seconds on/5 minutes off

**Onset of action** Slow, 6–12 months for maximal antidepressant effect

**Side effects** Voice alteration/hoarseness (stimulation of recurrent laryngeal nerve), cough, dysphagia

**Advantage** Continuous passive stimulation; no cognitive effects

**Indian context** Limited availability; high cost

### 3.2 Deep Brain Stimulation (DBS)

**Type** Invasive, bilateral electrode implantation + implanted pulse generator

**Mechanism** High-frequency stimulation of target nucleus inhibits or modulates activity

**Target for depression** Subgenual cingulate cortex (Brodmann area 25), nucleus accumbens, ALIC (anterior limb of internal capsule)

**Target for OCD** ALIC, STN (subthalamic nucleus)

**Target for movement disorders** STN, GPi (globus pallidus interna)

**Indication (psychiatry)** Refractory depression (investigational), treatment-resistant OCD (FDA humanitarian device exemption)

**Side effects** Surgical (hemorrhage, infection, lead migration), stimulation-related (hypomania, dysarthria, weight change)

### 3.3 Transcranial Direct Current Stimulation (tDCS)

**Type** Non-invasive; low-intensity direct current (1–2 mA)

**Mechanism** Anodal stimulation: depolarizes (excitatory); Cathodal: hyperpolarizes (inhibitory)

**Target** Anodal over left DLPFC (excitatory); cathodal over right DLPFC (inhibitory) for depression

**Indication** Adjunct treatment for depression; cognitive enhancement; stroke rehabilitation

**Side effects** Mild, scalp tingling, itching, erythema

**Evidence level** Moderate; less than rTMS; not FDA-approved for psychiatry

**Advantage** Cheap, portable, minimal infrastructure needed

### 3.4 Magnetic Seizure Therapy (MST)

- Uses transcranial magnetic stimulation delivered at high intensity to induce a seizure
- Requires anesthesia (like ECT)
- More focal stimulation than ECT, potentially less cognitive side effects
- Still investigational; limited availability

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## SECTION 4: POSTPARTUM PSYCHIATRIC DISORDERS

### 4.1 Overview and Classification

The postpartum period (up to 1 year after delivery) is a time of high psychiatric vulnerability. Three main syndromes are recognized, distinguished by timeline, severity, and need for intervention:

| FEATURE | BABY BLUES | POSTPARTUM DEPRESSION | POSTPARTUM PSYCHOSIS |
|---|---|---|---|
| **Onset** | 1–5 days post-delivery | 2–8 weeks (within 4 weeks in DSM-5) | Within 2 weeks (typically 1–14 days) |
| **Prevalence** | 50–70% | 10–15% | 1–2 per 1000 deliveries |
| **Duration** | Hours to days (resolves by day 14) | Weeks to months (if untreated) | Days to weeks (requires treatment) |
| **Core features** | Weeping, lability, anxiety, irritability, fatigue | Persistent low mood, anhedonia, guilt, poor bonding | Confusion, disorientation, hallucinations, delusions, rapid mood fluctuations |
| **Awareness/insight** | Intact | Usually intact | Impaired |
| **Functional impairment** | Mild | Moderate to severe | Severe |
| **Treatment** | Supportive, psychoeducation | Antidepressants, psychotherapy | Inpatient; antipsychotics + mood stabilizers |
| **Risk to infant** | None | Impaired bonding; possible neglect | Risk of infanticide (rare but real) |

### 4.2 Baby Blues (Maternity Blues)

**Epidemiology:** 50–70% of all postpartum women; universal phenomenon across cultures

**Onset:** Day 1–5 post-delivery (peaks day 3–5)

**Duration:** Self-limited; resolves by day 14 by definition

**Clinical Features:**

- Emotional lability (crying without clear reason)
- Irritability
- Anxiety
- Sleep disturbance (beyond that caused by infant care)
- Mild confusion
- Rapid mood swings

**Pathophysiology:**

- Rapid fall in estrogen and progesterone post-delivery
- Estrogen withdrawal affects serotonergic and dopaminergic systems
- Sleep deprivation
- Psychosocial adjustment demands

**Management:**

- Supportive counseling
- Psychoeducation (normalize the experience)
- Adequate sleep and social support
- Monitor, if symptoms persist beyond 2 weeks, reassess for PPD

> CLINICAL ANCHOR
> Baby blues require only reassurance and monitoring. They are NOT a diagnosis requiring treatment. The critical clinical skill is distinguishing blues from early PPD.

## 4.3 Postpartum Depression (PPD)

### 4.3.1 DEFINITION

- DSM-5: A major depressive episode with "peripartum onset", onset during pregnancy or within 4 weeks postpartum (clinical practice extends this to 12 weeks, sometimes up to 1 year)
- Edinburgh Postnatal Depression Scale (EPDS) is the standard screening tool

### 4.3.2 EPIDEMIOLOGY

- Prevalence: 10–15% (developed world); 20–25% in low-middle income countries
- Higher rates in: first-time mothers, teenagers, low socioeconomic status, prior psychiatric history
- Paternal PPD also occurs (~10% of fathers within first year)

### 4.3.3 RISK FACTORS (HIGH YIELD)

RISK FACTOR · RELATIVE RISK

| | |
|---|---|
| **Personal history of depression/anxiety** | Strongest predictor; RR 3–5 |
| **Personal history of PPD** | RR 25–50% recurrence |
| **History of PMDD** | Significant risk |
| **Poor social support / relationship difficulties** | High |
| **Recent adverse life events** | High |
| **Antenatal depression/anxiety** | High |
| **Birth trauma/complications** | Moderate |
| **Premature/ill infant** | Moderate |
| **Unplanned/unwanted pregnancy** | Moderate |
| **Domestic violence / IPV** | Moderate |
| **Immigrant status / cultural isolation** | Moderate |
| **Thyroid dysfunction** | Variable |

#### 4.3.4 CLINICAL FEATURES

- Persistent low mood, tearfulness
- Anhedonia
- Sleep disturbance (beyond infant demands)
- Appetite changes
- Excessive guilt and self-criticism ("I'm a bad mother")
- Impaired concentration and decision-making
- Poor mother-infant bonding
- Intrusive thoughts about harming infant (ego-dystonic, OCD-type thoughts, distinguished from psychosis)
- Suicidal ideation

> **CLINICAL ANCHOR**
> Intrusive thoughts about harming the infant in PPD are typically **ego-dystonic** (distressing, unwanted, resisted), similar to OCD. This is different from postpartum psychosis where commands from hallucinations may be ego-syntonic or the mother lacks insight. This distinction is life-saving.

### 4.3.5 EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)

**Developer** Cox, Holden & Sagovsky (1987)

**Items** 10 questions, 4-point Likert scale (0–3)

**Total score** 0–30

**Cutoff for PPD screening** ≥10–12 (varies by guideline); some use ≥13

**Item 10** Specifically asks about suicidal ideation

**Languages** Validated in >60 languages

**Use** Screening (not diagnostic); weekly to monthly monitoring

**Validated in India** Yes; Hindi, Kannada, Telugu, Tamil versions available

**EPDS Domains:** Anhedonia (1 item), anxiety (3 items), low mood (2 items), self-harm (1 item), guilt/coping (3 items)

> **EXAM PEARL**
> EPDS cutoff ≥10 (some sources say ≥13) for depression. Item 10 (suicidal ideation) requires immediate risk assessment regardless of total score. EPDS can be administered antenatally as well.

### 4.3.6 PHARMACOTHERAPY FOR PPD

**General Principles:**

- Drug choice depends on breastfeeding status (majority of mothers breastfeed)
- Hale's Lactation Risk Categories (LRC):
- L1 = Safest (compatible with nursing)
- L2 = Safer
- L3 = Moderately safe
- L4 = Possibly hazardous
- L5 = Contraindicated

| DRUG | BREASTFEEDING SAFETY | NOTES |
|---|---|---|
| **Sertraline** | L2 (safest SSRI in breastfeeding) | First-line; minimal transfer to milk; no adverse neonatal effects documented |
| **Paroxetine** | L2 | Very low milk transfer; not preferred due to discontinuation syndrome |

| DRUG | BREASTFEEDING SAFETY | NOTES |
|---|---|---|
| **Fluoxetine** | L3 | Long half-life; significant milk transfer; infant accumulation possible; avoid |
| **Citalopram** | L2-L3 | Some infant sedation reported |
| **Escitalopram** | L2 | Similar to citalopram; considered safe by most |
| **Nortriptyline** | L2 | TCA; low milk transfer; second-line |
| **Imipramine** | L2 | TCA; acceptable |
| **Venlafaxine** | L3 | Low transfer; use if SSRI fails |

> **EXAM PEARL**
>
> **Sertraline** is the gold standard for PPD in breastfeeding mothers. It has the most extensive safety data. Fluoxetine should be avoided due to long half-life and infant accumulation.

**Non-pharmacological treatment:**

- Interpersonal therapy (IPT), specifically adapted for PPD; first-line for mild-moderate PPD
- Cognitive-behavioral therapy (CBT)
- Mother-infant therapy
- Social support intervention
- Brexanolone (Zulresso), IV neuroactive steroid; FDA approved 2019 for moderate-severe PPD; single 60-hour IV infusion; works via GABAergic mechanism (synthetic allopregnanolone); not available in India

## 4.4 Postpartum Psychosis (PPP)

### 4.4.1 DEFINITION AND EPIDEMIOLOGY

- Most severe postpartum psychiatric emergency
- Prevalence: 1–2 per 1,000 deliveries
- Higher risk in women with bipolar disorder (risk: 25–50% with each delivery)
- Also higher in women with prior PPP, family history of bipolar or PPP

### 4.4.2 ONSET AND COURSE

- **Onset:** Typically within first 2 weeks post-delivery (often within 48–72 hours)
- Rapid onset distinguishes it from PPD
- Course: fluctuating, may oscillate between elation, depression, confusion within hours/days

- High risk of recurrence with subsequent pregnancies

### 4.4.3 CLINICAL FEATURES

- **Confusion and disorientation**, often the first sign; disproportionate to the clinical picture
- **Rapid mood fluctuations**, may swing from elation to despair within hours
- **Visual, auditory, olfactory hallucinations**
- **Delusions**, often related to the infant (infant is special/cursed/possessed/not hers)
- **Thought disorganization**
- **Psychomotor disturbance**, may be agitated or retarded
- **Sleep disturbance, often severe insomnia despite exhaustion**
- **Impaired insight**

> **CLINICAL ANCHOR**
> The **confusion and rapid fluctuations** in PPP distinguish it from schizophreniform psychosis. PPP looks more like a delirious or manic psychosis than a typical first-episode schizophrenia. Always rule out organic causes (delirium from sepsis, eclampsia, electrolyte disturbances) first.

### 4.4.4 DIFFERENTIAL DIAGNOSIS

- Postpartum delirium (sepsis, eclampsia, electrolyte disturbance, thyroiditis, Sheehan's syndrome)
- First-episode schizophrenia
- Brief psychotic disorder
- Bipolar disorder with psychotic features (PPP is often the first presentation of bipolar disorder)
- Substance intoxication/withdrawal

**Organic causes to exclude in PPP:**

- Sepsis (puerperal sepsis)
- Eclampsia
- Thyroid storm / autoimmune thyroiditis
- Electrolyte disturbances ($Na^+$, $Mg^{2+}$)
- Cortical vein thrombosis
- Sheehan's syndrome (pituitary infarction)
- Wernicke's encephalopathy (thiamine deficiency)

### 4.4.5 MANAGEMENT OF PPP

**Immediate:**

1. Psychiatric admission (mother-baby unit if available; protects mother-infant bond)

2. Full physical examination and investigations to exclude organic causes
3. Risk assessment for infanticide and suicide
4. Ensure infant safety, supervision of all mother-infant contact initially

**Pharmacological:**

- **Antipsychotics**, olanzapine (first choice), haloperidol (if sedation needed rapidly)
- Olanzapine 5–10 mg/day; adjust as needed
- If breastfeeding: olanzapine or quetiapine preferred (low milk transfer)
- **Mood stabilizer** (if bipolar features clear):
- Lithium, effective; can be used with monitoring; some transfer to breast milk, check infant lithium levels
- Valproate, effective but teratogenic for future pregnancies; causes hepatotoxicity concerns; generally avoided in breastfeeding (transfer is low but infant liver immature)
- **Benzodiazepines**, for acute agitation and sleep restoration (lorazepam 1–2 mg; use short-term)
- **ECT**, considered early for severe cases, catatonic features, or life-threatening illness

**Psychosocial:**

- Maintain mother-infant relationship with supervision
- Family psychoeducation
- IPT adapted for postpartum period
- Plan for relapse prevention for subsequent pregnancies

### 4.4.6 INFANTICIDE RISK ASSESSMENT

> **CLINICAL ANCHOR**
> The risk of infanticide (neonaticide, within first 24 hours; infanticide, within first year) is real but statistically rare. Risk is highest in PPP with command hallucinations, delusions about the infant, hopelessness, and suicidal ideation. The relationship between PPD with ego-dystonic intrusive thoughts and infanticide is weak, but still requires careful risk assessment.

**Risk Factors for Infanticide:**

- Active psychosis with delusions about the infant
- Command hallucinations ordering harm to infant
- Altruistic infanticide ideation ("the child will suffer in this world")
- Suicidal ideation with plan to kill infant first
- Lack of protective factors (social support, religious prohibition)
- History of abuse or trauma

**Assessment:**

- Direct inquiry about thoughts of harming infant (does not increase risk)
- Assessment of command hallucinations
- Assessment of relationship with infant
- Assessment of support network

## 4.5 Breastfeeding and Psychotropics

| DRUG CLASS | DRUG | LRC | NOTES |
|---|---|---|---|
| **Antidepressants** | Sertraline | L2 | First choice |
| | Paroxetine | L2 | Second choice |
| | Nortriptyline | L2 | TCA option |
| | Fluoxetine | L3 | Avoid |
| | Venlafaxine | L3 | Second-line SNRI |
| **Antipsychotics** | Olanzapine | L2 | Preferred |
| | Quetiapine | L4 | Some sources L2-L3; use caution |
| | Haloperidol | L2 | Old but safe data |
| | Clozapine | L3-L4 | Avoid, agranulocytosis risk in infant |
| | Risperidone | L3 | Lower evidence |
| **Mood stabilizers** | Lithium | L4 | Monitor infant lithium levels; use caution |
| | Valproate | L2 | Low milk transfer; generally acceptable |
| | Carbamazepine | L2 | Monitor infant CBC and LFTs |
| | Lamotrigine | L3 | 40–60% of maternal serum level in infant; monitor |
| **Benzodiazepines** | Lorazepam | L3 | Short courses acceptable; monitor sedation |
| | Diazepam | L3-L4 | Accumulates; avoid long-term |
| | Clonazepam | L3 | Use with caution |

EXAM PEARL

The LactMed database (NCBI) is the gold standard resource. Hale's categories are widely used in clinical practice. Key principle: weigh risk of untreated maternal illness (which affects infant through impaired bonding, neglect, emotional dysregulation) against drug risk.

## 4.6 Teratogenicity of Psychotropics

### 4.6.1 HIGH-RISK DRUGS (AVOID IN PREGNANCY)

| DRUG | TERATOGENIC RISK | SPECIFIC RISK |
|---|---|---|
| **Valproate (sodium valproate)** | HIGH, FDA Category D/X | Neural tube defects (1–4%; spina bifida); cardiac defects; craniofacial abnormalities; cognitive impairment in child (IQ deficit 7–9 points); autism spectrum disorder risk; fetal valproate syndrome |
| **Lithium** | Moderate | Ebstein's anomaly (tricuspid valve malformation), RR 1.5–3x; absolute risk low (~0.1%); cardiac monitoring via fetal echo recommended |
| **Carbamazepine** | Moderate | Neural tube defects (0.5–1%); craniofacial abnormalities; cognitive effects; less than valproate |
| **Paroxetine** | Moderate | Cardiac defects (VSD, ASD), disputed; generally avoid in first trimester |
| **SSRIs (general)** | Low-Moderate | Persistent pulmonary hypertension of newborn (PPHN) if used near term; neonatal adaptation syndrome (NAS: tremors, irritability, feeding difficulties, transient) |
| **Benzodiazepines** | Low-Moderate | Cleft palate (disputed); neonatal withdrawal; neonatal respiratory depression if near term |
| **Antipsychotics** | Low | Gestational diabetes (olanzapine, clozapine); QTc changes; NAS with FGAs |

> **EXAM PEARL**
>
> Valproate carries the **highest teratogenic risk** of any mood stabilizer. It should be actively avoided in women of childbearing potential unless no other option. In India, CDSCO has added warnings. The EU has additional restrictions (prohibition unless PREVENT program followed).

#### 4.6.2 RELATIVELY SAFER OPTIONS IN PREGNANCY

- **Depression:** Sertraline (most data); second-line escitalopram, citalopram
- **Bipolar disorder:** Lamotrigine (risk of cleft palate ~0.2–0.9%, lower than valproate); quetiapine; if lithium required, use with fetal echo
- **Psychosis:** Haloperidol (most data), olanzapine (watch gestational diabetes)
- **Anxiety:** Psychotherapy first; if drugs needed, sertraline or low-dose lorazepam short-term

---

## 4.7 Premenstrual Dysphoric Disorder (PMDD)

**DSM-5 Criteria:**

- 5+ symptoms in final week before menses, improving within few days of onset, minimal/absent in postmenstrual week
- Core symptoms: affective lability, irritability/anger, depressed mood, anxiety/tension
- Additional: anhedonia, difficulty concentrating, fatigue, appetite changes, hypersomnia/insomnia, feeling overwhelmed, physical symptoms (breast tenderness, bloating, weight gain)
- Causes marked distress or functional impairment
- Symptoms documented prospectively for 2 menstrual cycles (DRSP, Daily Record of Severity of Problems)
- Not attributable to another disorder

**Prevalence:** 3–8% of women of reproductive age

**Pathophysiology:**

- Abnormal CNS sensitivity to normal cyclical fluctuations in estrogen and progesterone
- Particularly to allopregnanolone (progesterone metabolite), a GABA-A receptor positive allosteric modulator
- Serotonergic dysregulation
- Not a hormone "deficiency", hormone levels are normal

**Treatment:**

- **First-line:** SSRIs, sertraline, fluoxetine (Sarafem), escitalopram

- Can be given continuously or only in luteal phase (day 14 to menses), luteal phase dosing effective and reduces side effects
- **Second-line:** Continuous OCP (suppresses ovulation cycle); GnRH agonists (leuprolide)
- **Third-line:** Ovarian suppression (GnRH + add-back therapy), bilateral oophorectomy (last resort)
- **Non-pharmacological:** CBTI, exercise, calcium supplementation (1200 mg/day, modest evidence)

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## SECTION 5: TELEPSYCHIATRY

### 5.1 Definition and Models

**Telepsychiatry:** The delivery of psychiatric services using telecommunication technologies, including synchronous video conferencing, asynchronous store-and-forward, telephone, and text-based modalities.

**Models:**

- **Synchronous:** Real-time video or telephone consultation between clinician and patient
- **Asynchronous (Store-and-Forward):** Recorded data (video, images, notes) sent to a specialist for review, used in dermatology, radiology; limited use in psychiatry
- **Hybrid:** Combination of in-person and telehealth
- **Hub-and-Spoke:** Specialist at hub (tertiary center) consults with clinician at spoke (peripheral/primary care)
- **Direct-to-patient:** Patient connects directly with psychiatrist from home
- **E-mental health:** Self-guided apps, online CBT programs, chatbot interventions

### 5.2 Telemedicine Practice Guidelines 2020 (India)

**Authority:** Ministry of Health and Family Welfare (MoHFW), Government of India

**Key Provisions:**

| PROVISION · DETAIL | |
|---|---|
| **Legal authority** | Telemedicine Practice Guidelines 2020 (Appendix 5 to Indian Medical Council Amendment) |
| **Registered practitioners** | Only registered physicians (under MCI/NMC) can practice telemedicine |
| **Technology platform** | Any technology can be used; patient data must be protected |
| **Consultation types** | First consultation, follow-up consultation, emergency |

**Prescription via telemedicine** Permitted, Schedule H and H1 drugs (including most psychotropics)

**Controlled substances (Schedule X)** NOT permitted via telemedicine (benzodiazepines, opioids, stimulants)

**Video consultation** Preferred for psychiatry; audio-only acceptable in certain circumstances

**Patient consent** Required; can be implied by initiating consultation

**Documentation** Same standard as in-person; maintain records

**Prescribing** First time (new patient): prescribe only in-person; telemedicine for follow-up preferred

**Emergency telemedicine** Basic first aid advice; refer to nearest facility

> EXAM PEARL
>
> Schedule X drugs (benzodiazepines, psychostimulants, opioids) **cannot be prescribed via telemedicine** under MoHFW 2020 guidelines. This is a high-yield legal point.

### 5.3 MHCA 2017 and Telepsychiatry

- MHCA 2017 does not specifically address telepsychiatry by name
- The Act mandates access to mental health care without discrimination based on location
- Telemedicine is viewed as a mechanism to fulfill this mandate, particularly for rural access
- Practitioners practicing telepsychiatry must comply with both MHCA 2017 and the Telemedicine Practice Guidelines 2020
- Documentation requirements under MHCA (including consent, medical records) apply equally to telepsychiatry

### 5.4 Evidence Base for Telepsychiatry

| CONDITION | EVIDENCE LEVEL | NOTES |
|---|---|---|
| **Depression** | Strong | Non-inferior to in-person for most outcomes |
| **Anxiety disorders** | Strong | Particularly effective for CBT delivery |
| **PTSD** | Strong | VA (US veterans) studies; non-inferior to in-person PE therapy |

| CONDITION | EVIDENCE LEVEL | NOTES |
|---|---|---|
| **Schizophrenia (stable)** | Moderate | Effective for monitoring and medication management |
| **Child/adolescent psychiatry** | Moderate | Access benefit in rural areas |
| **Substance use disorders** | Moderate | MAT delivery; counseling |
| **Suicide risk monitoring** | Limited | Complex, cannot perform full physical exam |

### 5.5 Platforms and Technology

- **Video platforms:** Secure, HIPAA/DISHA-compliant platforms preferred; WhatsApp and standard video calls technically permitted under Indian guidelines but with limitations
- **DISHA (Digital Information Security in Healthcare Act):** Proposed legislation for health data protection (not yet enacted as of 2025)
- **PG exams telepsychiatry model:** Hub (PG exams, Bengaluru) + spoke (district hospitals) model; well-validated; services to rural Karnataka; trained ASHA workers and PHC doctors as the "first contact"

### 5.6 Limitations of Telepsychiatry

LIMITATION · CLINICAL IMPLICATION

**Cannot perform physical examination** Cannot assess EPS, tardive dyskinesia physically; cannot monitor vital signs accurately

**Cannot administer psychometric tests in standard format** Adaptation needed; some tests not validated for telehealth

**Screen for violence or self-harm, safety planning limited** Cannot remove weapons; cannot ensure physical safety

**Digital divide** Rural patients may lack devices, internet, digital literacy

**Loss of non-verbal cues** Video quality limitations; partial view of patient

**Medicolegal ambiguity** Jurisdiction issues; prescribing across state lines

**Confidentiality in patient's home** Third parties may be present without clinician's knowledge

**Emergency management** Cannot call emergency services in patient's location without contact information

### 5.7 Tele-Assessment Challenges

- **Mental Status Examination via screen:** Appearance, behavior, speech, affect assessable; thought process and content assessable; cognition (MMSE) partially assessable
- **Cannot assess:** Gait, tremors, rigidity (for EPS monitoring), physical signs of self-harm, nutritional status fully
- **Rating scales:** HAM-D, MADRS, PANSS can be administered by video
- **Neuropsychological testing:** Requires standardized conditions; most not validated for remote administration

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## SECTION 6: COMMUNITY PSYCHIATRY IN INDIA

### 6.1 National Mental Health Programme (NMHP)

**Launched:** 1982 (revised 2003, 2017)

**Objectives:**

1. Prevention and treatment of mental and neurological disorders
2. Rehabilitation of the mentally ill
3. Reduction of associated disability

**Components:**

1. District Mental Health Programme (DMHP), primary implementation unit
2. Medical College Resource Centres (MCRC)
3. Centres of Excellence (CoE), PG exams, LGB Regional Institute
4. Special centres for epilepsy, rehabilitation
5. Human resource development (HRD)
6. IEC (Information, Education, Communication)
7. NGO participation

### 6.2 District Mental Health Programme (DMHP)

**Launched:** 1996, Bellary, Karnataka (pilot)

**Coverage:** All districts of India under 12th Five Year Plan

**Target population:** All mental illness, with focus on severe mental illness and suicide

**Structure of DMHP at District Level:**

COMPONENT · PERSONNEL

**District Mental Health Team** Psychiatrist, clinical psychologist, psychiatric social worker, psychiatric nurse

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| | |
|---|---|
| **Outreach services** | Mobile mental health units, community health workers |
| **Primary level** | Training of PHC doctors, ANMs, ASHAs in mental health first aid |
| **Secondary level** | District Hospital psychiatry OPD/ward |
| **Tertiary** | Referral to MCRC/CoE |

**Services under DMHP:**

- Outpatient treatment at district hospitals
- School mental health program
- College mental health program
- Workplace mental health
- Suicide prevention
- Training of general health workers
- Community awareness camps

**Manpower under DMHP (per district):**

- 1 Psychiatrist
- 1 Clinical Psychologist
- 1 Psychiatric Social Worker
- 1 Psychiatric Nurse
- Case Registry Officer
- Data entry operators

> EXAM PEARL
> DMHP was first piloted in Bellary (1996). The goal is to provide mental health care at district level without always needing tertiary referral. A key weakness is inadequate psychiatric manpower (India has ~0.3 psychiatrists per 100,000 population).

## 6.3 Other National Programs Relevant to Psychiatry

| PROGRAM | FOCUS |
|---|---|
| **National Programme for Health Care of Elderly (NPHCE)** | Dementia, depression in elderly |
| **Rashtriya Kishor Swasthya Karyakram (RKSK)** | Adolescent mental health |
| **Ayushman Bharat – Health and Wellness Centres** | Mental health integration into primary care |

| | |
|---|---|
| **National Suicide Prevention Strategy 2022** | 10% reduction in suicide rate by 2030; four pillars |
| **MANODARPAN** | Student mental health (COVID-era MoE initiative) |
| **Vandrevala Foundation** | NGO helpline 1860-2662-345 |
| **iCall (TISS)** | Online and phone counseling |
| **Vandana Mahajan model (Asha Kiran)** | Rural community mental health |

# SECTION 7: CULTURAL PSYCHIATRY

## 7.1 Culture-Bound Syndromes (India-Specific)

| SYNDROME | DESCRIPTION | DIFFERENTIAL |
|---|---|---|
| **Dhat syndrome** | Belief that semen is lost in urine; associated with weakness, fatigue, anxiety; more common in men | Sexual dysfunction, hypochondriasis, anxiety |
| **Koro** | Fear that genitals are retracting into body | Panic disorder, somatic symptom disorder |
| **Bhanmati** | Possession state attributed to sorcery (Andhra Pradesh) | Dissociative disorder |
| **Amok** | Brief explosive violent behavior (SE Asia) | Impulse control disorder, psychosis |
| **Windigo** | Cannibalistic delusions (North America, indigenous) | Psychosis |
| **Brain fag** | Cognitive exhaustion, eye strain attributed to excessive studying (West Africa) | Anxiety, depression |

**DSM-5 approach:** Culture-bound syndromes replaced by "Cultural Concepts of Distress", three types:

1. Cultural syndromes (distinct patterns of symptoms in specific cultures)
2. Cultural idioms of distress (ways of expressing distress, e.g., "heart pain," "liver distress")
3. Cultural explanations (causal attributions, supernatural, spiritual, humoral)

### 7.2 Stigma and Mental Health

**Internalized stigma:** Individual absorbs negative societal attitudes about mental illness into self-concept; leads to shame, concealment, treatment avoidance

**Structural stigma:** Institutional policies and resource allocation that disadvantage people with mental illness

**Social stigma:** Public attitudes and behaviors toward people with mental illness

**Anti-stigma interventions:**

- Contact-based education (most effective)
- Protest campaigns
- Education-based approaches
- Mental health literacy programs
- Media guidelines for reporting on mental health/suicide

**Mental Health Act and Stigma:** MHCA 2017 addresses stigma by emphasizing rights, dignity, non-discrimination, and participation of persons with mental illness in decisions about their care.

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## SECTION 8: PSYCHIATRIC EMERGENCIES OVERVIEW

### 8.1 Common Psychiatric Emergencies

EMERGENCY · FIRST-LINE MANAGEMENT

**Acute agitation** De-escalation; oral medication (olanzapine 10 mg OR haloperidol 5 mg + lorazepam 2 mg); if fails: IM olanzapine 10 mg OR IM haloperidol 5 mg + IM lorazepam 2 mg; droperidol IM

**Acute suicidal crisis** Risk assessment; hospitalization; remove means; crisis intervention

**Neuroleptic malignant syndrome** Stop antipsychotic; IV fluids; dantrolene; bromocriptine; ICU; ECT for severe cases

**Serotonin syndrome** Stop all serotonergic agents; cyproheptadine; IV fluids; lorazepam for agitation; severe: ICU

**Lithium toxicity** Stop lithium; IV saline; hemodialysis if severe (Li >3.5 mEq/L or severe symptoms)

**Anticholinergic toxidrome** Physostigmine 1–2 mg IV (diagnostic and therapeutic); supportive care

**Alcohol withdrawal / DTs** CIWA-Ar protocol; chlordiazepoxide or diazepam; thiamine; IV fluids

**Catatonia** Lorazepam 2 mg IV (challenge test); if responsive, lorazepam TID; if not, ECT

**Excited catatonia / malignant catatonia** ECT urgently; avoid antipsychotics

**Violent patient** Verbal de-escalation; safety (seclusion if needed); IM sedation; risk assessment

### 8.2 MHCA 2017 and Psychiatric Emergencies

- Emergency admission (Section 89): Person may be admitted for up to 24 hours without formal procedure in a genuine psychiatric emergency
- Must be formally assessed within 24 hours
- Rights (legal aid, nominated representative contact, right to be heard) apply even in emergency
- Restraint and seclusion must be humane, minimal, and documented

## KEY REFERENCES


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2. APA Task Force on Electroconvulsive Therapy, 3rd Edition (2001), updated practice parameters 2022
3. Stahl's Essential Psychopharmacology, 5th Edition (Stahl)
4. The Mental Health Care Act, 2017 (India), Gazette of India
5. Telemedicine Practice Guidelines 2020, MoHFW, Government of India
6. PG exams Standards for ECT Practice in India
7. Hale's Medications and Mothers' Milk, 19th Edition (Hale, Krutsch)
8. Edinburgh Postnatal Depression Scale, Cox, Holden & Sagovsky (1987), Br J Psychiatry
9. National Mental Health Policy of India 2014
10. WHO Mental Health Action Plan 2013–2030

# Model Answers

**Sources:** Kaplan & Sadock 12th ed., APA ECT Task Force 3rd ed., MHCA 2017, Stahl's 5th ed., Telemedicine Practice Guidelines 2020

## ANSWER 1

### Describe the indications and technique of ECT. [10 marks]

#### INDICATIONS FOR ECT

**Primary / First-Line Indications (where speed or safety justifies ECT before drug trials):**

1. **Severe major depressive episode with psychotic features**, response rate 85–90%; psychotic depression responds less well to antidepressants alone
2. **Suicidal emergency**, ECT produces antidepressant and antisuicidal effects within days; cannot wait 4–6 weeks for drug response
3. **Catatonia unresponsive to benzodiazepines**, ECT is the definitive treatment; lorazepam trial should precede ECT in most cases
4. **Acute mania (severe, treatment-resistant)**, when lithium/antipsychotics are insufficient or dangerous (renal failure, pregnancy)
5. **Neuroleptic Malignant Syndrome (NMS)**, after acute medical stabilization; addresses the underlying dopaminergic dysregulation
6. **Malignant catatonia**, overlap with NMS; ECT urgently indicated
7. **Severe depression with refusal to eat/drink**, medical compromise; ECT faster than drugs

**Secondary Indications (after ≥2 failed adequate pharmacotherapy trials):**

- Treatment-resistant depression (TRD)
- Treatment-resistant bipolar disorder
- Schizophrenia with prominent affective/catatonic features
- Schizoaffective disorder

**Special Populations:**

- **Pregnancy**, preferred over most psychotropics in first trimester for severe illness
- **Elderly**, safe; high response rates; monitor cognition
- **Parkinson's disease**, improves both mood and motor fluctuations

> **EXAM PEARL**
> Minors (under 18), ECT is **prohibited under MHCA 2017 Section 95**. No exceptions.

## TECHNIQUE OF ECT

**1. Pre-ECT Workup:**

- Full psychiatric evaluation confirming indication
- Informed consent per MHCA 2017 (Sections 94–95)
- Investigations: CBC, electrolytes, renal function, blood glucose, ECG, chest X-ray, spine X-ray (elderly)
- Cognitive baseline (MMSE)
- Drug review: withhold/reduce benzodiazepines, lithium, anticonvulsants, theophylline; withhold MAOIs 2 weeks
- Anesthesia evaluation

**2. Pre-procedure:**

- NPO: 6–8 hours for solids, 4 hours for clear liquids
- IV access
- Monitoring: ECG, pulse oximetry, blood pressure, EEG
- Anticholinergic premedication: glycopyrrolate 0.2 mg IV (prevents bradycardia and secretions)
- EEG electrodes applied bilaterally

**3. Anaesthesia:**

- **Induction agent:** Thiopentone sodium 2–4 mg/kg IV (gold standard in India); Propofol 1–2 mg/kg (raises seizure threshold, need higher ECT dose)
- **Muscle relaxant:** Succinylcholine 0.5–1.5 mg/kg IV (depolarizing; onset 30–60 sec; prevents fractures)
- **Oxygenation:** 100% O2 via bag-mask; hyperventilate (5–10 breaths, lowers seizure threshold by reducing CO2)

**4. Electrode Placement:**

- **Bilateral (bitemporal):** Highest efficacy; maximum cognitive side effects
- **Right Unilateral (RUL):** Less cognitive effects; requires 6x seizure threshold to match bilateral efficacy
- **Bifrontal:** Intermediate

**5. Isolated Limb Technique:**

- Blood pressure cuff inflated on one forearm/ankle above systolic pressure before succinylcholine

- Allows direct visualization of motor seizure in isolated limb
- Adequate motor seizure: ≥25 seconds

**6. Stimulus Delivery:**

- Brief-pulse or ultra-brief pulse square-wave stimulus
- Key parameters: frequency (Hz), pulse width (ms), duration (s), current (A), expressed as charge in millicoulombs (mC)
- Dosing: titration method (precise, preferred) or fixed-dose (age-based estimate)
- Bilateral ECT: 1.5–2x seizure threshold; RUL: 6x seizure threshold

**7. Seizure Adequacy:**

- Motor: ≥25 seconds (isolated limb)
- EEG: ≥20–25 seconds with postictal suppression
- If inadequate: re-stimulate (up to 3 attempts); increase energy 25–50%; hyperventilate

**8. Course:**

- Standard: 3 sessions/week (Mon-Wed-Fri); 6–12 sessions for depression
- Assess after every 3–4 sessions
- Maintenance ECT: tapering schedule for relapse prevention

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## ANSWER 2

### Consent for ECT under the Mental Health Care Act, 2017. [5 marks]

#### LEGAL FRAMEWORK (MHCA 2017)

**Section 94, ECT in Adults:**

1. **Informed consent is mandatory** before ECT can be administered to any adult
2. Patient must have **decision-making capacity (DMC)** at the time of consent
3. The patient must understand:
4. What ECT is and how it is administered
5. Why it is recommended
6. Expected benefits and risks (including cognitive side effects)
7. Available alternatives
8. Right to refuse or withdraw consent at any time
9. **If patient lacks DMC:**
10. Consent from **Nominated Representative (NR)** + second psychiatrist's opinion
11. If no NR: consent from any relative as defined in the Act + second psychiatrist
12. **Emergency exception:**

13. ECT may be given without consent only if life is at immediate risk
14. A **second psychiatrist must certify** the emergency necessity
15. Full documentation is mandatory
16. Patient must be informed of what was done as soon as DMC is restored
17. **Advance Directive** (Sections 5–11 MHCA): If a patient has previously specified wishes about ECT in a valid Advance Directive, those must be honored

**Section 95, ECT in Minors:**

- **ECT is completely prohibited for all persons under 18 years of age**
- There are no exceptions, not even in life-threatening emergencies
- This is an absolute prohibition

> **EXAM PEARL**
> The two key provisions are: (1) informed consent + second opinion if capacity impaired (Section 94); (2) absolute prohibition in under-18s (Section 95). Both are HIGH YIELD exam points.

**Practical Points:**

- Consent must be in writing, using designated MHCA forms
- Consent should be reaffirmed before each session if the patient's capacity has fluctuated
- Patients have the right to refuse ECT even when it is the clinically optimal choice
- Forced ECT (except the narrow emergency provision with second opinion) violates the Act

---

## ANSWER 3

### Bilateral versus right unilateral ECT: Compare and contrast. [5 marks]

| PARAMETER | BILATERAL (BL) ECT | RIGHT UNILATERAL (RUL) ECT |
|---|---|---|
| **Electrode positions** | Both temporal regions (Lancaster position) | Right temple + vertex (d'Elia position) |
| **Hemisphere stimulated** | Both | Non-dominant (right in most patients) |
| **Efficacy** | High; fastest response | Equivalent to bilateral ONLY at 6x seizure threshold |
| **Speed of response** | Faster (sessions to response) | Slightly slower at standard high dose |
| **Cognitive side effects** | More, especially retrograde amnesia | Significantly less |

| PARAMETER | BILATERAL (BL) ECT | RIGHT UNILATERAL (RUL) ECT |
|---|---|---|
| **Retrograde amnesia** | More severe; autobiographical memories | Less; primarily affects non-dominant hemisphere |
| **Anterograde amnesia** | Present | Less pronounced |
| **Required stimulus dose** | 1.5–2x seizure threshold | 6x seizure threshold (for full efficacy) |
| **At 2.5x threshold** | Full efficacy | Inferior efficacy, NOT equivalent to bilateral |
| **Preferred for** | Severe illness needing fastest response; catatonia; mania | Cognitive preservation priority; less severe illness |
| **Ultra-brief pulse compatibility** | Less studied | Best combination for cognitive safety |

**EXAM PEARL**

The dose-response relationship is critical: RUL at low dose is inferior. RUL at 6x threshold = bilateral at 1.5x threshold in terms of antidepressant efficacy. Clinicians who use RUL at low doses and wonder why it doesn't work are not complying with this requirement.

**EXAM STRATEGY**

If asked to choose between bilateral and RUL for a specific case, bilateral for: suicidal emergency, catatonia, failure of RUL; RUL for: elderly with cognitive concerns, first-episode, maintenance ECT.

## ANSWER 4

### ECT in pregnancy: Indications, modifications, and risks. [5 marks]

#### INDICATIONS FOR ECT IN PREGNANCY

ECT is considered the **preferred treatment** (over most psychotropics) in the following scenarios during pregnancy:

- Severe major depressive episode in **first trimester** (when teratogenic risk of drugs is highest)
- Acute psychosis or mania in pregnancy requiring rapid control
- Treatment-resistant depression or psychosis in any trimester
- Suicidal emergency in pregnancy
- Severe catatonia in pregnancy
- When rapid response is critical and pharmacotherapy poses unacceptable fetal risk (e.g., valproate for bipolar disorder)

## MODIFICATIONS TO ECT PROTOCOL IN PREGNANCY

| MODIFICATION | RATIONALE |
|---|---|
| **Obstetric anesthesiologist present** | Specialized monitoring |
| **Fetal heart rate monitoring (≥16 weeks gestation)** | Detect fetal bradycardia or distress |
| **Uterine contraction monitoring** | Detect premature labor |
| **Left lateral tilt of operating table** | Relieve aortocaval compression by gravid uterus |
| **Sodium citrate 30 mL orally before each session** | Reduce aspiration risk (reduced gastric emptying in pregnancy) |
| **Consider intubation if airway concerns** | Higher aspiration risk in pregnancy |
| **Tocolytic on standby (ritodrine/nifedipine)** | If uterine contractions occur |
| **Succinylcholine dose adjustment** | Plasma cholinesterase levels reduced in pregnancy; risk of prolonged apnea; use lowest effective dose |
| **Minimize hyperventilation** | Excessive hypocapnia can cause fetal hypoxia |
| **Low-dose ECT stimulus** | Minimize fetal exposure to adverse effects |
| **Pre-procedure IV hydration** | Maintain placental perfusion |

## RISKS OF ECT IN PREGNANCY

| RISK | MANAGEMENT |
|---|---|
| **Premature labor/uterine contractions** | Tocolytic standby; obstetric team present |
| **Fetal bradycardia** | Continuous fetal monitoring; optimize oxygenation |
| **Aortocaval compression** | Left lateral tilt |
| **Aspiration** | Antacid premedication; intubation if needed |
| **Prolonged apnea from succinylcholine** | Reduced dose; anticipate |
| **Placental abruption** | Rare; minimize blood pressure surges |

> **CLINICAL ANCHOR**
>
> ECT has no known teratogenic effects. The documented risks in pregnancy are procedural (cardiovascular, airway) rather than developmental. The risk of untreated severe psychiatric illness to the fetus (prematurity, poor nutrition, substance exposure, perinatal complications) generally exceeds the procedural risks of ECT.

## ANSWER 5

### Postpartum psychosis: Clinical features, differential diagnosis, and management. [10 marks]

#### DEFINITION

Postpartum psychosis (PPP) is a severe psychiatric emergency occurring in 1–2 per 1,000 deliveries, typically within the first 2 weeks post-delivery. It is characterized by the rapid onset of psychosis, mood disturbance, and confusion in the postpartum period.

#### CLINICAL FEATURES

**Onset:** Within 2 weeks of delivery (typically days 1–14; peak days 3–10)

**Characteristic Features:**

1. **Confusion and disorientation**, often the earliest sign; disproportionate to the clinical picture; distinguishes PPP from other psychoses
2. **Rapid mood fluctuations**, oscillations between elation, depression, and dysphoria within hours or days
3. **Perceptual disturbances**, visual, auditory, olfactory hallucinations
4. **Delusions**, often related to infant (special powers, cursed, not her child, the child must be harmed "to save" it)
5. **Thought disorganization**, incoherence, flight of ideas, tangentiality
6. **Severe insomnia**, disproportionate to infant care demands
7. **Psychomotor disturbance**, agitation or stupor
8. **Impaired insight**
9. **Command hallucinations** (in severe cases), risk factor for infanticide

#### DIFFERENTIAL DIAGNOSIS

| CONDITION · DISTINGUISHING FEATURES |
| --- |
| **Postpartum delirium** Identifiable medical cause (sepsis, eclampsia, electrolytes, thyroid); fluctuating consciousness; abnormal investigations |
| **Baby blues** Mild, self-limited, no psychosis, resolves by day 14 |
| **Postpartum depression** Gradual onset, no psychosis, intact insight, ego-dystonic intrusive thoughts |
| **Brief psychotic disorder** No postpartum temporal relationship; no confusion feature |
| **First-episode schizophrenia** Slower onset; more systematized delusions; less confusion; no postpartum link |

**Bipolar I disorder (first presentation)** PPP is often the first manifestation of bipolar disorder, assess carefully

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**Substance intoxication/withdrawal** Drug history, urine toxicology

**Organic Causes to Exclude:**

- Puerperal sepsis (fever, elevated WBC, source)
- Eclampsia (BP, proteinuria, seizures)
- Thyroid storm / autoimmune thyroiditis (TSH, free T4)
- Electrolyte disturbances (Na+, Mg2+, Ca2+)
- Cortical vein thrombosis (headache, neurological signs, MRI)
- Sheehan's syndrome (pituitary infarction post-PPH; cortisol low)
- Wernicke's encephalopathy (thiamine deficiency; ataxia, ophthalmoplegia, confusion)

> EXAM PEARL
> Always rule out organic causes before diagnosing PPP. Postpartum period uniquely increases vulnerability to multiple organic precipitants simultaneously.

## MANAGEMENT

**1. Assessment and Immediate Safety:**

- Urgent psychiatric assessment; risk assessment for infanticide and suicide
- Direct questioning about thoughts of harming infant (safe and necessary)
- Assess command hallucinations and delusions about infant
- Ensure supervised contact with infant until risk assessment complete

**2. Admission:**

- Inpatient psychiatric admission mandatory
- **Mother-baby unit** (if available), preserves mother-infant bond while ensuring safety
- If unavailable: general psychiatric ward with supervised infant contact

**3. Organic workup:**

- Full blood count, metabolic panel (electrolytes, glucose, renal, liver, calcium)
- Thyroid function (TSH, free T4, thyroid antibodies)
- Blood cultures if fever present
- Neuroimaging (CT/MRI) if neurological signs present
- Urine toxicology

**4. Pharmacological Management:**

| DRUG CLASS | CHOICE | NOTES |
|---|---|---|
| **Antipsychotic** | Olanzapine 5–10 mg (first-line); haloperidol 5 mg IM if rapid sedation needed | Olanzapine preferred in breastfeeding (low milk transfer) |
| **Mood stabilizer** (if bipolar features) | Lithium (after delivery, effective for maintenance); valproate (effective; caution in breastfeeding) | Lithium is drug of choice for relapse prevention post-PPP |
| **Benzodiazepine** | Lorazepam 1–2 mg for acute agitation and sleep | Short-term; monitor in breastfeeding |
| **ECT** | For severe, rapidly deteriorating cases; catatonic features; life threat; command hallucinations with imminent risk | Should not be delayed in severe cases |

**5. Breastfeeding Considerations:**

- Olanzapine, haloperidol: low milk transfer, acceptable
- Lithium: monitor infant serum lithium levels; some prefer bottle-feeding
- Valproate: low milk transfer; generally acceptable
- Decision shared with mother; untreated illness also harms infant

**6. Long-term Planning:**

- Lithium for prophylaxis in subsequent pregnancies (start immediately post-delivery)
- Recurrence risk with subsequent deliveries: 25–50% without prophylaxis; reduced with lithium
- Psychoeducation for patient and family
- Mental health monitoring plan for future pregnancies

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## ANSWER 6

### Screening for postpartum depression: The Edinburgh Postnatal Depression Scale. [5 marks]

#### BACKGROUND

The Edinburgh Postnatal Depression Scale (EPDS) is the most widely used and validated screening tool for postpartum depression (and antenatal depression). It was developed by Cox, Holden, and Sagovsky (1987) and published in the British Journal of Psychiatry.

#### STRUCTURE

**Number of items** 10

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**Response format** 4-point Likert scale (0–3) per item

**Total score range** 0–30

**Administration time** 5 minutes

**Self-administered or clinician-administered** Both formats used

**Validated in India** Yes, Hindi, Kannada, Tamil, Telugu versions available

### DOMAINS COVERED

1. Ability to laugh / see funny side of things (anhedonia)
2. Looking forward with enjoyment (anhedonia)
3. Blaming self unnecessarily (guilt)
4. Anxiety and worry
5. Fear/panic without good reason
6. Things overwhelming / inability to cope
7. Unhappiness, difficulty sleeping (beyond infant waking)
8. Feeling sad or miserable
9. Unhappiness, crying
10. **Thoughts of self-harm or suicide**, Item 10 requires immediate clinical assessment regardless of total score

### CUTOFF SCORES

| SCORE | INTERPRETATION | ACTION |
|---|---|---|
| **0–9** | Low risk | Routine monitoring |
| **10–12** | Borderline / possible PPD | Repeat in 1–2 weeks; clinical interview |
| **≥13** | Probable PPD | Full psychiatric assessment; treatment |
| **Any score on Item 10 >0** | Suicidal ideation | Immediate risk assessment |

*Note: Some guidelines use ≥10 as the cutoff; others ≥12 or ≥13. NICE guidelines use ≥10; Edinburgh Health Board (original) used ≥13.*

### TIMING OF ADMINISTRATION

- Antenatally: 28–32 weeks (antenatal depression predicts PPD)
- Postnatally: 4–6 weeks; repeat at 3 months
- Can be used for ongoing monitoring throughout postnatal period

### LIMITATIONS

- Screening tool only, not a diagnostic instrument
- Does not capture psychotic features
- May miss anxious presentations (weighted toward low mood)
- Cross-cultural validity variable (requires local validation)
- Paternal version available (Edinburgh Paternal Depression Scale, EPDS-P)

> **EXAM PEARL**
> EPDS is a **screening** tool, not diagnostic. A positive screen requires clinical interview for formal diagnosis. Item 10 (suicidal ideation) requires immediate action regardless of total score.

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## ANSWER 7

### Drugs safe for use in breastfeeding in psychiatry. [5 marks]

### PRINCIPLES OF PSYCHOTROPIC SAFETY IN BREASTFEEDING

**Hale's Lactation Risk Categories (LRC):**

- L1 = Safest (no risk observed in extensive studies)
- L2 = Safer (limited adverse effects; probably compatible)
- L3 = Moderately safe (moderate risk; use only if benefit > risk)
- L4 = Possibly hazardous (significant risk)
- L5 = Contraindicated

Key pharmacokinetic factors affecting infant exposure:

- **Milk-to-plasma ratio** (M/P ratio), lower = safer
- **Molecular weight**, higher molecular weight drugs transfer less
- **Protein binding**, highly protein-bound drugs transfer less
- **Infant's hepatic maturity**, younger infants metabolize drugs less efficiently
- **Oral bioavailability**, some drugs have poor infant absorption

### ANTIDEPRESSANTS

| DRUG | LRC | EVIDENCE | RECOMMENDATION |
|---|---|---|---|
| **Sertraline** | L2 | Extensive; undetectable levels in infant serum in most studies | **First choice** |
| **Paroxetine** | L2 | Low transfer; no adverse infant effects | Second choice; discontinuation syndrome in mother |

| DRUG | LRC | EVIDENCE | RECOMMENDATION |
|---|---|---|---|
| Escitalopram | L2 | Low transfer; some studies show small serum levels in infant | Acceptable; second-line |
| Nortriptyline | L2 | TCA; undetectable infant serum levels in studies | Acceptable; older drug |
| Imipramine | L2 | TCA; low transfer | Acceptable |
| Venlafaxine | L3 | Moderate transfer; active metabolite (desvenlafaxine) also present in milk | Second-line SNRI |
| Citalopram | L2–L3 | Infant sedation and poor feeding reported in some cases | Use with caution |
| **Fluoxetine** | **L3** | Long half-life (active metabolite norfluoxetine); accumulates in infant | **Avoid if possible** |
| MAOIs | L4 | Not recommended | Avoid |

## ANTIPSYCHOTICS

| DRUG | LRC | RECOMMENDATION |
|---|---|---|
| **Olanzapine** | L2 | Preferred; low M/P ratio; extensive safety data in postpartum context |
| Haloperidol | L2 | Old data; low transfer; acceptable |
| Quetiapine | L4 (some sources L2–L3) | Low milk transfer data; some concern about sedation; use cautiously |
| Clozapine | L3–L4 | Risk of agranulocytosis in infant; **avoid** |
| Risperidone | L3 | Less data; some transfer; use with caution |
| Aripiprazole | L3 | Moderate transfer; limited data |

### MOOD STABILIZERS

| DRUG | LRC | RECOMMENDATION |
|---|---|---|
| **Lithium** | L4 | Significant transfer (40% of maternal level in infant serum); monitor infant lithium, thyroid, renal; some authors say compatible with close monitoring; risk of lithium toxicity in infant with dehydration |
| **Valproate** | L2 | Low transfer; generally acceptable; caution re: infant liver immaturity; some sources recommend against |
| **Carbamazepine** | L2 | Monitor infant CBC and LFTs; acceptable |
| **Lamotrigine** | L3 | 40–60% of maternal serum level in infant; monitor infant for rash, lethargy; high exposure compared to other drugs |

### BENZODIAZEPINES

| DRUG | LRC | RECOMMENDATION |
|---|---|---|
| **Lorazepam** | L3 | Short courses acceptable; single short-acting doses; monitor infant sedation |
| **Clonazepam** | L3 | Accumulates with repeated dosing; avoid long-term |
| **Diazepam** | L3–L4 | Long half-life; accumulates; avoid ongoing use |

> **EXAM PEARL**
>
> **Sertraline** is the single safest choice in breastfeeding for depression. **Olanzapine** for psychosis. **Lithium** requires careful monitoring but is not absolutely contraindicated.

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## ANSWER 8

### rTMS: Mechanism, indications, and parameters. [5 marks]

### MECHANISM OF ACTION

Repetitive Transcranial Magnetic Stimulation (rTMS) delivers rapidly alternating magnetic field pulses via a coil placed over the scalp. By Faraday's law of electromagnetic induction,

this generates electrical currents in the underlying cortical neurons without requiring electrodes or anesthesia.

**Frequency-dependent effects:**

- **High-frequency (≥10 Hz):** Excitatory, increases cortical excitability and neuronal firing
- **Low-frequency (≤1 Hz):** Inhibitory, decreases cortical excitability

**Mechanism in depression:**

- Left DLPFC is hypoactive in depression
- High-frequency rTMS over left DLPFC restores activity → normalizes fronto-limbic circuitry
- Downstream effects: increased BDNF, normalized monoamine neurotransmission, modulation of default mode network

### FDA-APPROVED INDICATIONS

1. **Treatment-resistant major depression** (2008), failed 1+ antidepressant trials
2. **OCD**, deep TMS (H7 coil) (2018)
3. **Smoking cessation**, deep TMS (2020)
4. **MDD with anxious depression** (2021)

### PARAMETERS FOR DEPRESSION

| PARAMETER | VALUE |
|---|---|
| **Target site** | Left dorsolateral prefrontal cortex (DLPFC) |
| **Frequency** | 10 Hz (standard); 1 Hz (right DLPFC, inhibitory) |
| **Intensity** | 120% of resting motor threshold (RMT) |
| **Pulses per session** | 3,000 |
| **Session duration** | 37.5 minutes |
| **Sessions per week** | 5 (Monday–Friday) |
| **Total sessions** | 20–30 |
| **Total treatment duration** | 4–6 weeks |

### THETA BURST STIMULATION (TBS)

- Pattern: 3 pulses at 50 Hz repeated at 5 Hz
- **Intermittent TBS (iTBS):** Excitatory, 600 pulses in 3 minutes; FDA-approved; non-inferior to standard 10 Hz
- **Continuous TBS (cTBS):** Inhibitory

- Major advantage: drastically shorter treatment time (3 min vs 37 min)

### ADVANTAGES OVER ECT

- No anesthesia required
- No cognitive side effects
- Outpatient procedure
- No seizure induction
- Can be used in medically frail patients

### DISADVANTAGES VS ECT

- Slower response (4–6 weeks vs days)
- Lower efficacy in severe illness
- Not effective in psychotic or catatonic states
- Infrastructure and cost

> **EXAM STRATEGY**
> ECT vs rTMS: ECT wins for severe, psychotic, catatonic, or immediately life-threatening depression. rTMS is for moderate-to-severe depression without psychosis where cognitive preservation matters.

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## ANSWER 9

### Telepsychiatry in India: Framework, evidence, and limitations. [5 marks]

### DEFINITION

Telepsychiatry refers to the delivery of psychiatric assessment, diagnosis, treatment, and monitoring using telecommunication technologies, primarily synchronous video consultations.

### LEGAL FRAMEWORK IN INDIA

**Telemedicine Practice Guidelines 2020 (MoHFW):**

- Issued by Ministry of Health and Family Welfare as Appendix 5 to IMC Amendment
- Only NMC/MCI-registered practitioners can practice telemedicine
- Most psychotropics (Schedule H/H1) can be prescribed via telemedicine
- **Schedule X drugs (benzodiazepines, opioids, stimulants) CANNOT be prescribed via telemedicine**
- Documentation standards equivalent to in-person practice
- Patient consent required

- First consultation for a new patient: in-person preferred; telemedicine for follow-up encouraged

**MHCA 2017:**

- Does not specifically name telepsychiatry
- Mandates equitable access to mental health care regardless of location
- Telepsychiatry is a mechanism to fulfill this mandate for underserved populations
- All MHCA provisions (consent, records, rights) apply equally

### EVIDENCE BASE

- **Depression:** Multiple RCTs showing non-inferiority to in-person therapy (particularly CBT delivery)
- **Anxiety disorders:** Strong evidence; telehealth CBT for panic disorder, social anxiety, GAD
- **PTSD:** VA studies showing non-inferiority for Prolonged Exposure delivered by video
- **Schizophrenia (stable):** Effective for medication management and monitoring
- Meta-analyses: telepsychiatry non-inferior to in-person for most clinical outcomes (therapeutic alliance, symptom reduction, patient satisfaction)

### PG EXAMS MODEL (INDIA)

- Hub-and-spoke model: PG exams (Bengaluru) as hub; district hospitals and PHCs as spokes
- Trained ASHA workers and PHC doctors as first point of contact
- Specialist consultation via video for complex cases
- Validated in rural Karnataka; adopted as national model reference

### LIMITATIONS

| LIMITATION · CLINICAL IMPACT | |
|---|---|
| **Cannot perform physical examination** | Cannot monitor EPS, TD; vital signs limited |
| **Digital divide** | Rural patients lack devices, internet, digital literacy |
| **Schedule X prohibition** | Cannot prescribe benzodiazepines; limits acute management |
| **Confidentiality in patient's home** | Third parties present; CCTV, recording risks |
| **Emergency response limited** | Cannot ensure physical safety; relies on emergency contact list |
| **Non-verbal cue limitation** | Video quality; partial body view |
| **Cross-state prescribing ambiguity** | Jurisdictional grey areas |

**Cannot conduct invasive monitoring** Blood draws, ECG for lithium monitoring not possible remotely

> **EXAM PEARL**
> The Schedule X prohibition is a high-yield legal point. Benzodiazepines cannot be prescribed via telemedicine in India under the 2020 guidelines.

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## ANSWER 10

### District Mental Health Programme (DMHP): Structure and components. [5 marks]

#### BACKGROUND

The DMHP was launched in 1996 at Bellary, Karnataka, as a pilot under the National Mental Health Programme (NMHP). It aimed to decentralize mental health services to the district level, moving away from the tertiary-care-only model.

#### OBJECTIVES

1. Provide mental health services at the district level
2. Train primary health care workers to identify and manage common mental disorders
3. Reduce burden on tertiary centers
4. Improve community awareness and reduce stigma
5. Facilitate rehabilitation and reintegration

#### CORE TEAM AT DISTRICT LEVEL (PER DISTRICT)

| ROLE · NUMBER | |
|---|---|
| **Psychiatrist** | 1 |
| **Clinical Psychologist** | 1 |
| **Psychiatric Social Worker** | 1 |
| **Psychiatric Nurse** | 1 |
| **Case Registry Officer** | 1 |
| **Data Entry Operator** | Support staff |

#### SERVICES PROVIDED UNDER DMHP

1. **Outpatient services** at district hospital, diagnosis, treatment, follow-up
2. **Inpatient services**, acute management at district hospital

3. **School mental health program**, identify and support students with mental health issues; teacher training
4. **College mental health program**, counseling services at degree colleges
5. **Workplace mental health**, stress management programs
6. **Training of primary health workers**, PHC doctors, ANMs, ASHAs in mental health first aid
7. **IEC activities**, awareness camps, media campaigns
8. **Suicide prevention**, gatekeeper training, crisis intervention
9. **Drug supply management**, ensure availability of essential psychotropics at district level

#### NMHP VS DMHP (SEE ALSO COMPARISONS CHAPTER)

- NMHP = National policy framework (launched 1982)
- DMHP = Operational implementation unit (launched 1996), the ground-level expression of NMHP

> **EXAM PEARL**
> DMHP first piloted at Bellary (1996). The critical weakness is manpower: India has approximately 0.3 psychiatrists per 100,000 population (vs WHO recommended 1 per 10,000). This means each DMHP district psychiatrist covers far more than the intended workload.

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## ANSWER 11

### Maintenance ECT: Indications, schedule, and evidence. [5 marks]

#### DEFINITION

Maintenance ECT (M-ECT) refers to the continued administration of ECT after the completion of a successful acute course, at gradually increasing intervals, to prevent relapse.

#### INDICATIONS

1. High frequency of relapse on pharmacotherapy alone
2. Multiple prior depressive or manic episodes
3. Treatment-resistant illness (inadequate response to pharmacotherapy)
4. Patient preference (especially if prior ECT response was superior to drug response)
5. Intolerance or contraindication to maintenance pharmacotherapy
6. High suicidal risk requiring ongoing aggressive management
7. Conditions where pharmacotherapy is not possible (certain medical comorbidities, pregnancy)

### SCHEDULE

The tapering schedule most commonly used:

- Weeks 1–4: Once weekly
- Weeks 5–8: Fortnightly
- Month 3 onwards: Monthly (ongoing if needed)
- Some protocols: individualize based on relapse risk, more frequent in high-risk patients

### COMBINATION WITH PHARMACOTHERAPY

- Pharmacotherapy should be combined with M-ECT in most cases
- Combination of M-ECT + nortriptyline shown superior to nortriptyline alone in preventing relapse (Kellner et al., RCT)
- Lithium often combined with M-ECT in bipolar disorder

### COGNITIVE MONITORING DURING M-ECT

- Serial cognitive testing every 3–6 months minimum
- MMSE, Hopkins Verbal Learning Test, or equivalent
- If significant cognitive decline: consider spacing sessions further; switch to RUL; use ultra-brief pulse
- Cognitive effects of M-ECT are cumulative but often manageable with placement and pulse-width optimization

### EVIDENCE

- Kellner et al. (2006) NEJM: M-ECT combined with nortriptyline superior to nortriptyline alone in preventing relapse after acute ECT
- Multiple observational studies: M-ECT effective for up to several years
- APA Task Force: M-ECT is an established, evidence-based intervention, not experimental

> **EXAM PEARL**
>
> Maintenance ECT is backed by RCT evidence (Kellner et al., NEJM 2006). It is not "a last resort" or "experimental." It is a legitimate long-term treatment strategy.

---

## ANSWER 12

**Cognitive side effects of ECT: Types, mechanisms, and management. [5 marks]**

### TYPES OF COGNITIVE EFFECTS

**1. Post-ictal Confusional State:**

- Onset: Immediately after each session
- Duration: 15–60 minutes (occasionally longer in elderly or high-dose bilateral ECT)

- Features: disorientation, agitation, confusion
- Self-limiting; requires reassurance and monitoring

**2. Anterograde Amnesia:**

- Inability to form new memories during the ECT treatment course
- Present during acute treatment; resolves within weeks of completing ECT
- Largely reversible

**3. Retrograde Amnesia:**

- Loss of memories from the period surrounding ECT
- Can extend months to years prior to treatment (especially with bilateral ECT)
- Autobiographical memory more affected than semantic memory
- Personal memories (dates, events, faces) more vulnerable than general knowledge
- Partial recovery over weeks to months; some permanent loss possible
- More severe with: bilateral placement, sine-wave (obsolete), high stimulus dose, frequent sessions

**4. Working Memory and Executive Function:**

- Transient impairment during acute ECT course
- Generally resolves after completion

**5. Subjective Memory Complaints:**

- Patients often report significant subjective memory impairment even when objective tests are normal
- Validate and explain; do not dismiss
- Some persistent subjective complaints may reflect permanent retrograde amnesia for personal memories

### MECHANISM

- Seizure-induced disruption of hippocampal memory consolidation processes
- Postictal suppression of hippocampal function
- Bilateral stimulation affects both hippocampi simultaneously → greater impact
- Right (non-dominant) hemisphere stimulation selectively (RUL) reduces verbal memory effects

### FACTORS WORSENING COGNITIVE EFFECTS

- Bilateral > RUL > bifrontal electrode placement
- Sine-wave > brief-pulse > ultra-brief pulse stimulation
- Higher stimulus dose above threshold
- More frequent sessions (3x/week > 2x/week)

- Higher total number of sessions
- Pre-existing cognitive impairment
- Old age
- Concurrent medications (lithium, benzodiazepines)

### MANAGEMENT STRATEGIES

| STRATEGY · EVIDENCE LEVEL | |
|---|---|
| **Switch to RUL electrode placement** | Strong |
| **Use ultra-brief pulse stimulation** | Strong |
| **Reduce frequency (2x/week instead of 3x)** | Moderate |
| **Minimize stimulus dose (use titration)** | Moderate |
| **Discontinue contributing medications (lithium, BZDs)** | Moderate |
| **Serial cognitive monitoring** | Best practice |
| **Patient and family education** | Best practice |
| **Dose-reduction or pause if severe** | Clinical judgment |

> **EXAM STRATEGY**
> In exam answers on cognitive effects, always mention: (1) the three types (postictal, anterograde, retrograde); (2) the key risk factors; (3) how to minimize (RUL + ultra-brief pulse). This pattern gets full marks.

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## ANSWER 13

### Psychiatric emergencies: Assessment and management of acute agitation. [5 marks]

### DEFINITION

Acute agitation is a state of extreme inner discomfort associated with motor restlessness, verbal and physical aggression, and impulsive behavior. It represents a psychiatric emergency requiring immediate intervention.

### CAUSES (DE-ESCALATION-FAST MNEMONIC FOR DIFFERENTIAL)

- **Psychiatric:** Acute psychosis (schizophrenia, mania), substance intoxication or withdrawal, delirium, dementia, PTSD, personality disorder crisis
- **Medical/Organic:** Head injury, hypoglycemia, hypoxia, thyroid storm, seizure (postictal), CNS infection, anticholinergic toxidrome, serotonin syndrome, NMS, hepatic

encephalopathy

## ASSESSMENT

1. Ensure staff safety first (stand-off, no back to wall, exit available)
2. Rapid physical assessment (vital signs, neurological, capillary blood glucose)
3. Brief psychiatric history from collateral if patient not cooperating
4. Identify likely cause (psychiatric vs organic)
5. STAMP (Staring, Tone of voice, Anxiety, Mumbling, Pacing), early agitation signs

## MANAGEMENT

### Step 1: Verbal De-escalation

- Calm, non-threatening tone and body language
- Acknowledge distress; validate feelings
- Offer choices (oral medication, calm environment)
- Remove audience and reduce stimulation
- Limit-setting: clear, non-punitive

### Step 2: Oral Medication (if de-escalation insufficient)

| OPTION | DOSE | NOTES |
|---|---|---|
| **Olanzapine oral/wafer** | 10 mg | Rapid-dissolving wafer effective |
| **Haloperidol + lorazepam** | 5 mg + 2 mg oral | Classic combination |
| **Risperidone oral solution** | 2–4 mg | Good oral bioavailability |

### Step 3: Intramuscular Medication (if oral refuses/not possible)

| OPTION | DOSE | NOTES |
|---|---|---|
| **Olanzapine IM** | 10 mg | Do NOT combine IM olanzapine with IM BZD (respiratory depression risk) |
| **Haloperidol IM** | 5 mg | Can combine with lorazepam IM 2 mg |
| **Droperidol IM** | 5–10 mg | Rapid onset; cardiac monitoring for QTc |
| **Midazolam IM** | 5–10 mg | Useful in alcohol-related agitation |
| **Ziprasidone IM** | 10–20 mg | Not available in India |
| **Aripiprazole IM** | 9.75 mg | Not sedating; good for antipsychotic initiation |

> **EXAM PEARL**
> Do NOT combine IM olanzapine with IM benzodiazepine, risk of severe respiratory depression and death. Use either/or, with monitoring if both needed. This is a patient safety point.

**Step 4: Restraint and Seclusion** (only if medication insufficient and imminent danger)

- Must follow institutional protocols and MHCA humane treatment provisions
- Document clearly: reason, duration, monitoring
- Reassess frequently; discontinue as soon as safe

**Step 5: Reassess and Treat Underlying Cause**

- Once agitation controlled: full assessment of underlying cause
- Initiate definitive treatment

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## ANSWER 14

### NMS: Diagnosis and management. [5 marks]

#### DEFINITION

Neuroleptic Malignant Syndrome (NMS) is a life-threatening idiosyncratic reaction to antipsychotic drugs (or dopamine-blocking agents) characterized by hyperthermia, muscle rigidity, autonomic instability, and altered consciousness.

#### CAUSES

- All antipsychotics (FGAs > SGAs; haloperidol most implicated)
- Metoclopramide, prochlorperazine, droperidol
- Abrupt withdrawal of dopaminergic drugs in Parkinson's disease

#### CLINICAL FEATURES: "FEVER" MNEMONIC

- **F**ever (hyperthermia, often >38.5°C; can reach 41°C)
- **E**ncephalopathy (altered consciousness, confusion to coma)
- **V**ital instability (tachycardia, labile BP, diaphoresis, tachypnea)
- **E**levated CPK (>1000 U/L; often massively elevated >10,000)
- **R**igidity (lead-pipe rigidity, diffuse)

Additional: elevated WBC (leukocytosis), elevated liver enzymes, elevated creatinine (myoglobinuria → renal failure)

#### INVESTIGATIONS

- CPK (creatine phosphokinase), hallmark; should be checked in any suspected case
- Full metabolic panel, LFTs, renal function

- Urine myoglobin (risk of renal failure)
- Blood cultures (exclude sepsis)
- CT head if altered consciousness with focal signs
- Lumbar puncture if CNS infection not excluded

### MANAGEMENT

**1. Stop the causative drug immediately**

**2. Supportive care (ICU):**

- IV hydration (prevent renal failure from rhabdomyolysis)
- Temperature control (cooling blankets, paracetamol, avoid aspirin)
- Airway management (intubation if severe)
- Monitoring (cardiac, renal, neurological)
- Thromboprophylaxis (risk of DVT)

**3. Specific pharmacological treatment:**

- **Dantrolene** 1–2.5 mg/kg IV every 6 hours (muscle relaxant, reduces rigidity and hyperthermia; blocks sarcoplasmic reticulum Ca2+ release)
- **Bromocriptine** 2.5–5 mg TID orally (dopamine agonist, addresses the dopaminergic mechanism)
- **Amantadine** (alternative dopamine agonist)
- **Lorazepam** IV for agitation and catatonic features

**4. ECT:**

- Indicated for severe/refractory NMS, especially when catatonic features are prominent
- Should not be delayed if patient deteriorating
- Effective via dopaminergic normalization mechanism

**5. Resume antipsychotic:**

- Wait minimum 2 weeks after resolution
- Use an SGA (lower NMS risk) at lowest effective dose
- Monitor closely

> **CLINICAL ANCHOR**
> NMS is on the differential for ANY patient on antipsychotics who develops fever + rigidity + altered consciousness. CPK is the key investigation. Early dantrolene + bromocriptine + ICU care reduces mortality from historical 20–30% to <5%.

---

## ANSWER 15

### Teratogenicity of mood stabilizers in pregnancy. [5 marks]

#### GENERAL PRINCIPLES

Psychotropic drugs taken during the first trimester carry the highest teratogenic risk (organogenesis occurs weeks 4–10). However, untreated severe psychiatric illness also carries fetal risks (prematurity, intrauterine growth restriction, substance use, perinatal complications). A risk-benefit discussion with the patient is essential.

#### VALPROATE (HIGHEST RISK)

**Teratogenic risk** HIGH, FDA Category D (risk confirmed)

**Neural tube defects** 1–4% (vs 0.03% background); spina bifida, anencephaly

**Cardiac defects** VSD, ASD, coarctation

**Craniofacial abnormalities** Fetal valproate syndrome (FVS): thin upper lip, broad nasal bridge, epicanthal folds

**Cognitive effects** IQ deficit of 7–9 points vs matched controls (Meador et al.); dose-dependent

**Autism spectrum disorder** RR 3–5x background rate

**Other** Hypospadias; digital/nail changes

**Folic acid supplementation** 5 mg/day reduces (but does not eliminate) neural tube defect risk

**Recommendation** **Avoid in all women of childbearing age unless no alternative**; discuss contraception

#### LITHIUM

**Teratogenic risk** Low–Moderate

**Ebstein's anomaly** RR 1.5–3x background (absolute risk ~0.1%); tricuspid valve malformation

**Revised risk** Earlier studies overestimated; actual risk lower than historical estimates

**Recommendation** If essential, continue with fetal echocardiography at 18–22 weeks; monitor serum lithium closely (renal handling changes in pregnancy); split doses; lowest effective dose

**Near term** Reduce dose at delivery (renal clearance drops post-delivery); neonatal toxicity reported

### CARBAMAZEPINE

**Teratogenic risk** Moderate

**Neural tube defects** 0.5–1% (spina bifida), less than valproate

**Craniofacial** Minor anomalies; cleft palate (rare)

**Cognitive effects** Less than valproate

**Folic acid supplementation** 5 mg/day recommended

**Recommendation** Safer than valproate; still requires counseling

### LAMOTRIGINE

**Teratogenic risk** Low–Moderate

**Main concern** Cleft palate (0.2–0.9%, higher than background ~0.04%)

**Cognitive effects** Largely reassuring data, preferred mood stabilizer in pregnancy for bipolar

**Pharmacokinetics in pregnancy** Clearance increases 50–300% in pregnancy; doses often need to be doubled; reduce back to pre-pregnancy dose post-partum

**Recommendation** **Preferred mood stabilizer for bipolar disorder in pregnancy** if antiepileptic needed

> **EXAM PEARL**
> Valproate hierarchy: highest teratogenic risk among mood stabilizers → avoid in women of childbearing potential. Lamotrigine is the preferred alternative for bipolar disorder in pregnancy. Always add high-dose folic acid (5 mg/day) when any anticonvulsant is used.

CHAPTER 03 · ECT SPECIAL TOPICS

# Mnemonics & Memory Tricks

**Sources:** Kaplan & Sadock 12th ed., APA ECT Task Force, MHCA 2017, Stahl's 5th ed.

## MNEMONIC 1

### ECT Indications: "SAD CAMP"

MNEMONIC

**SAD CAMP**

LETTER · INDICATION

**S** Suicidal emergency (requires rapid response)

**A** Affective disorder, severe MDD with psychotic features

**D** Depression, treatment-resistant (failed ≥2 drug trials)

**C** Catatonia (unresponsive to lorazepam)

**A** Acute mania (severe, treatment-resistant)

**M** Malignant catatonia / NMS (after medical stabilization)

**P** Pregnancy (severe psychiatric illness where drugs are contraindicated)

EXAM PEARL

Memorize SAD CAMP for the indications list. In exam answers, structure your indications as "primary/first-line" vs "secondary" (after drug failure), this earns extra marks.

## MNEMONIC 2

### Pre-ECT Workup: "CIBLESS"

MNEMONIC

**CIBLESS** (What you need before ECT so you're not caught off-guard)

LETTER · INVESTIGATION

**C** CBC (complete blood count)

**I** Investigations, electrolytes, renal function, blood glucose

**B** Baseline ECG (12-lead)

**L** Liver function tests

**E** Examination, anesthesia evaluation + dental check

**S** Spine X-ray (especially elderly, osteoporosis, fracture risk)

**S** Scan, brain CT/MRI only if space-occupying lesion suspected

Bonus additions: Chest X-ray, cognitive baseline (MMSE).

> EXAM STRATEGY
> The investigations list is commonly asked in 5-mark questions. Present them in a logical table format: haematological → biochemical → cardiac → radiological → clinical assessment.

## MNEMONIC 3

### ECT Contraindications: "PARIS"

> MNEMONIC
> **PARIS** (Absolute contraindications that could "ruin your trip")

LETTER · CONTRAINDICATION

**P** Pheochromocytoma, catecholamine surge during seizure = fatal

**A** Aneurysm (cerebral or aortic), rupture risk during BP surge

**R** Raised intracranial pressure, herniation risk

**I** Infarction (recent MI <3 months), relative contraindication

**S** Space-occupying lesion with mass effect

> EXAM PEARL
> **P** (Pheochromocytoma) and **R** (Raised ICP) are the two that most sources call "absolute." The rest are relative. The APA states there are essentially no absolute contraindications, but examiners expect pheochromocytoma and raised ICP.

## MNEMONIC 4

### Drugs to Withhold Before ECT: "BLAST"

MNEMONIC

**BLAST** (These drugs will BLAST your seizure, either by preventing it or causing problems)

LETTER · DRUG

**B** Benzodiazepines, raise seizure threshold; taper and withhold

**L** Lithium, increases neurotoxicity and cognitive side effects

**A** Anticonvulsants, raise seizure threshold; reduce/withhold if possible

**S** Succinylcholine interactions, MAOIs must be stopped 2 weeks before (interaction with anesthetics)

**T** Theophylline, unpredictably lowers seizure threshold; risk of status epilepticus

CLINICAL ANCHOR

Continue: SSRIs, antipsychotics, antihypertensives, beta-blockers. Withhold: BLAST drugs. Metformin should also be withheld on the day of ECT (lactic acidosis risk with GA fasting).

## MNEMONIC 5

### Postpartum Disorder Timeline: "3 Bs in Order"

MNEMONIC

**Blues → Baby (Depression) → Blast (Psychosis)**, "The Blues Come First, Then It Gets Worse"

| DISORDER | ONSET | DURATION | PREVALENCE | KEY FEATURE |
|---|---|---|---|---|
| **Baby Blues** | Day 1–5 (peaks day 3–5) | Hours to days; resolves by day 14 | 50–70% | Labile mood; self-limiting; no treatment |
| **Baby (PPD)** | 2–8 weeks (within 4 weeks DSM-5) | Weeks to months if untreated | 10–15% | Persistent low mood; impaired bonding; EPDS ≥10 |
| **Blast (PPP)** | Within 2 weeks (peaks days 3–14) | Days to weeks without treatment | 1–2/1000 | Confusion, rapid fluctuations, hallucinations, delusions |

EXAM PEARL

Timeline mastery is high-yield. Baby Blues = days, resolves by day 14. PPD = weeks (2–8 weeks post-delivery). PPP = rapid onset within 2 weeks. The confusion in PPP distinguishes it from schizophrenia.

---

## MNEMONIC 6

### Edinburgh Postnatal Depression Scale (EPDS) Domains: "A2 L2 G2 C S"

MNEMONIC

**"A2 L2 G2 C S"**, Two anhedonia, two anxiety, two low mood, one guilt/cope, one self-harm

| CODE | ITEMS | COUNT |
|---|---|---|
| **A2** | Anhedonia: (1) ability to laugh; (2) looking forward with enjoyment | 2 |
| **L2** | Low mood: (8) unhappy, miserable; (9) unhappiness/crying | 2 |
| **Anx2** | Anxiety: (4) worried/anxious; (5) scared/panicked; (6) things overwhelming | 3 (not 2, see note) |
| **G** | Guilt/self-blame: (3) blaming self unnecessarily | 1 |
| **S** | Sleep beyond infant demands: (7) difficulty sleeping | 1 |
| **SH** | Self-harm/suicidal: (10) thoughts of harming self | 1 |

Total: 10 items, 0–30 score. Cutoff: ≥10–13 depending on guideline.

**Simplified version:** "The EPDS has 10 items: 2 anhedonia + 3 anxiety + 2 low mood + 1 guilt + 1 sleep + 1 self-harm = 10."

EXAM PEARL

Item 10 (self-harm) is the critical safety item. Any score >0 on Item 10 requires immediate clinical risk assessment, regardless of total score. Highlight this in exam answers.

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## MNEMONIC 7

### Teratogenic Drugs in Psychiatry: "VaLCaP"

MNEMONIC

**VaLCaP**, "Valproate Leads Clearly Past" all others in teratogenic risk

| LETTER | DRUG | RISK |
|---|---|---|
| **Va** | Valproate (sodium valproate) | HIGHEST, neural tube defects 1–4%, cognitive deficit, autism |
| **L** | Lithium | Moderate, Ebstein's anomaly (~0.1% absolute risk) |
| **C** | Carbamazepine | Moderate, neural tube defects 0.5–1% |
| **a** | (add folic acid for all anticonvulsants) | 5 mg/day for all above |
| **P** | Paroxetine | Low-moderate, cardiac defects (disputed); avoid first trimester |

Order by risk: Valproate > Carbamazepine > Lithium > Lamotrigine > Paroxetine

EXAM PEARL

Valproate has the worst teratogenic profile. Lamotrigine is the preferred mood stabilizer in pregnancy, but dose must be adjusted (clearance increases 50–300% during pregnancy). Folic acid 5 mg/day for all anticonvulsants.

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## MNEMONIC 8

### Breastfeeding-Safe Drugs: "SOn PHONe" (Safe Ones PHarmacologically)

MNEMONIC

**SOn PHONe**, the drugs you can keep "on the phone" with breastfeeding

| LETTER | DRUG | CLASS | LRC |
|---|---|---|---|
| **S** | Sertraline | Antidepressant (SSRI) | L2, FIRST CHOICE |
| **O** | Olanzapine | Antipsychotic | L2 |
| **n** | Nortriptyline | Antidepressant (TCA) | L2 |
| **P** | Paroxetine | Antidepressant (SSRI) | L2 |

| LETTER | DRUG | CLASS | LRC |
|---|---|---|---|
| **H** | Haloperidol | Antipsychotic (FGA) | L2 |
| **O** | (avoid) flOxetine | SSRI to AVOID | L3, accumulates |
| **N** | Nortriptyline (repeat, easy to recall) | TCA | L2 |
| **e** | escitalopram | SSRI | L2 |

Simplified: **Sertraline** (antidepressants), **Olanzapine** (antipsychotics), **Carbamazepine** + **Valproate** (mood stabilizers, low transfer), **Lorazepam short-term** (BZDs).

> EXAM STRATEGY
> Lead with "Sertraline is the gold standard for depression in breastfeeding." Then add antipsychotics (olanzapine). Then explain the lithium nuance (monitor infant levels). This structure gives a complete answer.

---

## MNEMONIC 9

### NMHP / DMHP Components: "STRIDE"

> MNEMONIC
> **STRIDE**, what DMHP helps patients take a STRIDE forward in mental health

LETTER · COMPONENT

**S** School mental health program

**T** Training of PHC workers (ASHAs, ANMs, PHC doctors)

**R** Rehabilitation services

**I** IEC (Information, Education, Communication) campaigns

**D** Drug supply management (essential psychotropics at district level)

**E** Emergency psychiatric services at district hospital

Core team: **Psychiatrist + Clinical Psychologist + Psychiatric Social Worker + Psychiatric Nurse** (1 each per district).

> EXAM PEARL
> DMHP was first piloted in **Bellary, Karnataka in 1996**. The biggest challenge is manpower, India has ~0.3 psychiatrists per 100,000 population vs WHO recommendation of 1 per 10,000.

## MNEMONIC 10

### Postpartum Psychosis: Organic Causes to Exclude, "SETS WE"

MNEMONIC

**SETS WE** (These organic causes "set we" up for misdiagnosis if missed)

LETTER · ORGANIC CAUSE

**S** Sepsis (puerperal sepsis, fever, elevated WBC)

**E** Eclampsia (BP, proteinuria, seizures)

**T** Thyroid (storm or autoimmune thyroiditis post-partum)

**S** Sheehan's syndrome (pituitary infarction post-PPH, hypocortisolism)

**W** Wernicke's encephalopathy (thiamine deficiency, ataxia, confusion, ophthalmoplegia)

**E** Electrolyte disturbance (Na+, Mg2+, Ca2+)

Also: Cortical vein thrombosis (CVT), headache, focal signs, MRI diagnosis.

CLINICAL ANCHOR

In any woman presenting with acute confusion and psychiatric symptoms in the postpartum period, exclude organic causes FIRST. The investigation panel: FBC, metabolic panel, TFTs, cortisol, blood cultures, MRI if focal signs.

## MNEMONIC 11

### ECT Cognitive Side Effects: Spectrum and Management, "RAPID AR"

MNEMONIC

**RAPID AR**, the cognitive effects of ECT are RAPID at onset, needing AR (Active Reduction)

LETTER · CONTENT

**R** Retrograde amnesia (most distressing; autobiographical memory loss)

**A** Anterograde amnesia (during course; resolves after ECT completes)

**P** Post-ictal confusion (15–60 minutes after each session; self-limiting)

**I** Impaired working memory and executive function (during course)

**D** Duration of sessions, reducing frequency reduces burden

**A** Active reduction strategies: RUL + ultra-brief pulse + low dose + serial monitoring

**R** Resolution, most effects resolve weeks after completing ECT

> EXAM PEARL
> In the exam, differentiate: **anterograde** (cannot make new memories) vs **retrograde** (loses old memories). Bilateral ECT causes more of both. Ultra-brief pulse + RUL combination minimizes both.

## MNEMONIC 12

### rTMS Parameters for Depression: "LEFT 10 120 3K"

> MNEMONIC
> **LEFT 10 120 3K**, Left hemisphere, 10 Hz, 120% motor threshold, 3,000 pulses

CODE · MEANING

**LEFT** Target: Left DLPFC (dorsolateral prefrontal cortex)

**10** Frequency: 10 Hz (excitatory, high-frequency)

**120** Intensity: 120% of resting motor threshold (RMT)

**3K** 3,000 pulses per session

Additional: 20–30 sessions total, 5 days/week, over 4–6 weeks.

Theta burst: **3 pulses at 50 Hz, repeated at 5 Hz**, iTBS = 600 pulses in 3 minutes.

> EXAM PEARL
> Contrast rTMS with ECT: rTMS has NO cognitive effects, NO anesthesia, NO seizure, but is SLOWER (4–6 weeks vs days for ECT) and LESS EFFECTIVE in severe illness. This contrast is commonly asked.

## MNEMONIC 13

### NMS Features: "FEVER"

MNEMONIC

**FEVER**, the hallmark of NMS

LETTER · FEATURE

**F** Fever (hyperthermia, often >38.5°C, can reach 41°C)

**E** Encephalopathy (altered consciousness, confusion to coma)

**V** Vital sign instability (tachycardia, labile BP, diaphoresis, tachypnea)

**E** Elevated CPK (>1000 U/L; often >10,000) + elevated WBC

**R** Rigidity (lead-pipe rigidity, diffuse, cardinal sign)

Management: Stop antipsychotic → ICU → IV fluids → Dantrolene → Bromocriptine → ECT if severe/refractory.

CLINICAL ANCHOR

NMS vs Serotonin Syndrome (SS): NMS = slow onset (days), lead-pipe rigidity, no clonus, caused by D2 blockers. SS = rapid onset (hours), neuromuscular excitability (clonus, hyperreflexia, myoclonus), caused by serotonergic excess.

## MNEMONIC 14

### Telemedicine Schedule X Prohibition: "BOSS Can't Text"

MNEMONIC

**BOSS Can't Text**, Schedule X (BOSS drugs) cannot be prescribed via telemedicine

LETTER · DRUG CLASS

**B** Benzodiazepines (diazepam, clonazepam, lorazepam, alprazolam)

**O** Opioids (morphine, codeine, tramadol-containing Schedule X formulations)

**S** Stimulants (methylphenidate, amphetamines)

**S** Sedative-hypnotics (zolpidem, eszopiclone)

All Schedule X drugs = controlled substances under Drugs and Cosmetics Act → cannot be prescribed via telemedicine under MoHFW 2020 guidelines.

> **EXAM PEARL**
> Most psychotropics (antidepressants, antipsychotics, mood stabilizers) are Schedule H/H1, these CAN be prescribed via telemedicine. Only Schedule X (controlled) cannot. This is the key legal distinction.

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## MNEMONIC 15

### ECT Electrode Placement: "BRightF", Going from Most to Least Cognitive Risk

> **MNEMONIC**
> **BRightF**, B (Bilateral) has the brightest cognitive effects (worst), going down

| PLACEMENT | COGNITIVE RISK | EFFICACY |
|---|---|---|
| **B**ilateral (Bitemporal) | HIGHEST | Highest; fastest |
| **R**UL (Right Unilateral) | LOW | High, only at 6x seizure threshold |
| bi**F**rontal | INTERMEDIATE | Intermediate |

Additional memory aid:

- **RUL = Non-dominant hemisphere = less verbal memory impact**
- **Bilateral = Both hippocampi hit = more amnesia**
- **d'Elia position = RUL landmark** (right temporal + vertex)
- **Lancaster position = Bilateral landmark** (3–4 cm above zygoma-auricular midpoint, bilateral)

> **EXAM STRATEGY**
> If an exam question describes a patient needing ECT but "worried about memory," the answer is RUL + ultra-brief pulse. If it describes a "suicidal emergency requiring fastest response," bilateral is justified.

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## MNEMONIC 16

### EPDS Cutoff Quick Reference: "10, 13, 0"

MNEMONIC

**10 (screen), 13 (diagnose), 0 (refer immediately)**

SCORE · ACTION

**<10** Low risk; routine follow-up

**10–12** Borderline; repeat EPDS in 1–2 weeks; clinical interview

**≥13** Probable PPD; full psychiatric assessment + treatment

**Item 10 > 0 (any score)** Immediate suicidal risk assessment regardless of total score

EXAM PEARL

Know the EPDS: 10 items, 0–30, cutoff ≥10 (some say ≥13). Always mention Item 10 separately, it is a non-negotiable safety screen item.

## MNEMONIC 17

### Hale's Lactation Risk Categories: "Safest to Scariest"

MNEMONIC

**L1 = Lovely (safest), L5 = Lethal (avoid)**

| CATEGORY | MEANING | EXAMPLE |
|---|---|---|
| **L1** | Safest, no risk in extensive studies | (few psych drugs here) |
| **L2** | Safer, limited adverse effects; probably compatible | Sertraline, olanzapine, haloperidol, paroxetine |
| **L3** | Moderately safe, use if benefit > risk | Fluoxetine, venlafaxine, lamotrigine |
| **L4** | Possibly hazardous, significant risk | Lithium, quetiapine (some sources) |
| **L5** | Contraindicated, risk out-weighs any benefit | (no standard psych drugs; clozapine approaching) |

EXAM STRATEGY

In any breastfeeding question: categorize your answer by L category. "Sertraline (L2) is the first-line antidepressant. Fluoxetine (L3) should be avoided due to accumulation in infant."

## MNEMONIC 18

### Organic Causes of Acute Agitation: "HIDE + MAST"

MNEMONIC

**HIDE MAST**, what medical causes to HIDE before labeling as psychiatric

LETTER · CAUSE

**H** Hypoglycemia / Hypoxia

**I** Intoxication (alcohol, stimulants, cannabis) or Infection (sepsis, encephalitis)

**D** Delirium (any etiology) / Drugs (anticholinergic toxidrome, serotonin syndrome, NMS)

**E** Epilepsy (postictal state) / Endocrine (thyroid storm, Addisonian crisis)

**M** MI (rare cause of acute confusion in elderly)

**A** Alcohol withdrawal (DTs, tremulousness, confusion, hallucinations)

**S** Stroke (acute confusional state)

**T** Trauma (head injury, subdural hematoma)

CLINICAL ANCHOR

Always check capillary blood glucose, oxygen saturation, and vital signs in any acutely agitated patient before administering sedative medication. Treating hypoglycemia as "agitation" with haloperidol can be fatal.

## SUMMARY TABLE: All Mnemonics at a Glance

| # | MNEMONIC | COVERS |
|---|---|---|
| 1 | SAD CAMP | ECT indications |
| 2 | CIBLESS | Pre-ECT investigations |
| 3 | PARIS | ECT absolute/major contraindications |

| # | MNEMONIC | COVERS |
|---|---|---|
| 4 | BLAST | Drugs to withhold before ECT |
| 5 | Blues → Baby → Blast | Postpartum disorder timeline |
| 6 | A2 L2 Anx2 G S SH | EPDS domains |
| 7 | VaLCaP | Teratogenic psychotropics |
| 8 | SOn PHONe | Breastfeeding-safe drugs |
| 9 | STRIDE | DMHP components |
| 10 | SETS WE | Organic causes in PPP |
| 11 | RAPID AR | ECT cognitive effects + management |
| 12 | LEFT 10 120 3K | rTMS parameters |
| 13 | FEVER | NMS features |
| 14 | BOSS Can't Text | Telemedicine Schedule X prohibition |
| 15 | BRightF | ECT electrode placement + cognitive risk |
| 16 | 10, 13, 0 | EPDS cutoff reference |
| 17 | L1=Lovely → L5=Lethal | Hale's LRC categories |
| 18 | HIDE MAST | Organic causes of agitation |

# High-Yield Comparisons

**Sources:** Kaplan & Sadock 12th ed., APA ECT Task Force 3rd ed., MHCA 2017, Stahl's 5th ed., Telemedicine Practice Guidelines 2020

## TABLE 1

### Bilateral vs Right Unilateral vs Bifrontal ECT

| PARAMETER | BILATERAL (BITEMPORAL) | RIGHT UNILATERAL (RUL) | BIFRONTAL |
|---|---|---|---|
| **Electrode position** | Lancaster position: 3–4 cm above zygoma-auricular midpoint, bilaterally | d'Elia position: right temple + 3 cm right of vertex | Both frontal regions, 5 cm above lateral canthus bilaterally |
| **Hemisphere stimulated** | Both | Right (non-dominant in ~95%) | Both frontal lobes |
| **Efficacy** | Highest; fastest response | Equivalent to bilateral ONLY at ≥6x seizure threshold | Intermediate; less studied |
| **Dose required** | 1.5–2x seizure threshold | 6x seizure threshold | 1.5–2.5x seizure threshold |
| **Speed of response** | Fastest | Slightly slower than BL at equivalent efficacy | Intermediate |
| **Retrograde amnesia** | Most severe | Least (non-dominant hemisphere spared) | Intermediate |
| **Anterograde amnesia** | More pronounced | Less pronounced | Intermediate |
| **Post-ictal confusion** | More frequent and prolonged | Less frequent | Intermediate |
| **Cognitive effects overall** | Most | Least | Intermediate |
| **Missed seizures** | Fewer | More common (higher threshold to achieve) | Intermediate |
| **Preferred for** | Catatonia; severe psychotic depression; suicidal emergency; mania | Cognitive preservation priority; first episode; maintenance ECT; elderly | Alternative when RUL fails but cognitive concern persists |

| PARAMETER | BILATERAL (BITEMPORAL) | RIGHT UNILATERAL (RUL) | BIFRONTAL |
|---|---|---|---|
| **Ultra-brief pulse compatibility** | Less optimal (may reduce efficacy) | Best combination (lowest cognitive burden) | Possible |
| **MHCA considerations** | Standard; consent as per Sections 94–95 | Standard | Standard |

EXAM PEARL

The single most important fact about RUL ECT: it must be delivered at **6x seizure threshold** to achieve efficacy equivalent to bilateral. At lower doses (even 2.5x), RUL is clearly inferior. This is the most commonly tested nuance about electrode placement.

## TABLE 2

### Brief-Pulse vs Ultra-Brief Pulse Stimulation

| PARAMETER | SINE-WAVE (HISTORICAL) | BRIEF-PULSE (BP) | ULTRA-BRIEF PULSE (UBP) |
|---|---|---|---|
| **Pulse width** | Continuous sinusoidal | 0.5–2.0 ms | ≤0.3 ms (typically 0.2 ms) |
| **Era of use** | 1938–1970s | 1980s–present (standard) | 2000s–present (innovation) |
| **Efficacy** | High (but excessive stimulation) | High | Slightly lower, especially bilateral; equivalent with high-dose RUL |
| **Cognitive side effects** | Very high (excess neuronal firing) | Moderate | Significantly reduced |
| **Retrograde amnesia** | Severe | Moderate | Mild |
| **Energy required to reach seizure threshold** | Low | Moderate | Higher (threshold is elevated) |
| **Best electrode pairing** | (abandoned) | Bilateral or RUL | RUL (optimal); bifrontal |
| **Current status** | Completely abandoned | Current standard for bilateral ECT | Preferred when cognitive preservation is priority |
| **Evidence level** | Historical | Strong RCT evidence | Moderate–strong; multiple RCTs |

| PARAMETER | SINE-WAVE (HISTORICAL) | BRIEF-PULSE (BP) | ULTRA-BRIEF PULSE (UBP) |
|---|---|---|---|
| **Typical machine setting** | Not available on modern machines | Default setting most machines | Selectable on modern machines |

EXAM PEARL

Sine-wave ECT is **obsolete**, it caused maximal cognitive side effects with no additional therapeutic benefit over brief-pulse. The question "compare brief-pulse and ultra-brief pulse ECT" is a common 5-marker. Key answer: UBP has fewer cognitive effects, especially with RUL, at the cost of slightly lower efficacy in some populations.

## TABLE 3

### Baby Blues vs Postpartum Depression vs Postpartum Psychosis

| FEATURE | BABY BLUES | POSTPARTUM DEPRESSION (PPD) | POSTPARTUM PSYCHOSIS (PPP) |
|---|---|---|---|
| **Onset** | Day 1–5 (peaks day 3–5) | 2–8 weeks post-delivery (DSM-5: within 4 weeks) | Within 2 weeks (often days 3–14) |
| **Prevalence** | 50–70% | 10–15% | 1–2 per 1,000 deliveries |
| **Duration** | Hours to days; resolves by day 14 | Weeks to months if untreated | Days to weeks without treatment |
| **Core mood features** | Lability, tearfulness, irritability, anxiety | Persistent low mood, anhedonia, guilt | Rapid fluctuations, elation, despair, irritability within hours |
| **Psychosis** | Absent | Absent | Present, hallucinations, delusions |
| **Confusion/disorientation** | Absent | Absent | **Present, often the first sign; cardinal feature** |
| **Insight** | Intact | Usually intact | **Impaired** |
| **Thoughts about infant** | Normal attachment (with exhaustion) | Impaired bonding; ego-dystonic intrusive thoughts (OCD-type) | Delusions about infant (special, cursed, not hers, must be harmed) |
| **Suicidality** | Absent | May be present | May be present with infanticide risk |
| **Risk to infant** | None | Impaired bonding; neglect (if severe) | **Infanticide risk (rare but real)** |

| FEATURE | BABY BLUES | POSTPARTUM DEPRESSION (PPD) | POSTPARTUM PSYCHOSIS (PPP) |
|---|---|---|---|
| **Bipolar link** | No | Weak | **Strong, PPP is often first presentation of Bipolar I** |
| **Treatment** | Supportive; psychoeducation; monitor | Antidepressants (sertraline first-line); IPT/CBT | **Inpatient; antipsychotics; mood stabilizer; ECT if severe** |
| **Recurrence risk** | Low | 25–50% with subsequent pregnancy | **25–50% with subsequent delivery without prophylaxis** |
| **EPDS use** | Not indicated | Yes, screen and monitor | Not primary tool; full psychiatric assessment needed |

EXAM STRATEGY

This three-way comparison is the highest-yield table in postpartum psychiatry. The three distinguishing features that examiners test: (1) **timeline**; (2) **presence of confusion** (PPP cardinal); (3) **insight** (absent in PPP). Learn the whole table.

CLINICAL ANCHOR

The confusion in PPP is the clinical key, it looks more like a delirious state than a "clean" psychosis. Always consider organic causes (sepsis, eclampsia, thyroid, electrolytes) before diagnosing PPP.

## TABLE 4

### ECT vs rTMS vs tDCS

| PARAMETER | ECT | RTMS | TDCS |
|---|---|---|---|
| **Mechanism** | Generalized seizure, multiple mechanisms (neurotrophic, monoamine, anticonvulsant, neuroendocrine) | Focal electromagnetic induction → cortical excitability modulation | Low-intensity direct current → neuronal membrane polarization (anodal = excitatory; cathodal = inhibitory) |
| **Seizure induced** | Yes, therapeutic seizure required | No | No |
| **Anesthesia required** | Yes, general anesthesia | No | No |
| **Setting** | Inpatient or day-care; requires theatre | Outpatient clinic | Outpatient; potentially home-use |

| PARAMETER | ECT | RTMS | TDCS |
|---|---|---|---|
| **Target** | Global (bilateral or lateralized) | Left DLPFC (primary for depression) | Left DLPFC (anodal, excitatory) |
| **Efficacy in severe depression** | Highest (70–90% response rate) | Moderate (50–60% response rate) | Low–moderate (adjunct role) |
| **Speed of action** | Days (3–5 sessions) | Weeks (4–6 weeks) | Weeks |
| **Cognitive side effects** | Present (retrograde amnesia, anterograde amnesia) | None | Minimal (scalp tingling; rare headache) |
| **Cardiovascular effects** | Significant (bradycardia, tachycardia, BP surges) | Minimal | Minimal |
| **FDA approval (psychiatry)** | Long-standing; APA Task Force endorsed | 2008 (MDD); 2018 (OCD); 2020 (smoking) | Not FDA-approved for any psychiatric indication |
| **Use in psychosis/catatonia** | Yes, highly effective | Limited evidence | Not studied |
| **Use in OCD** | Limited evidence | Deep TMS (H7 coil) FDA-approved | Not approved |
| **Use in pregnancy** | Yes, preferred for severe illness | Limited data; generally avoided | Not studied |
| **Infrastructure cost** | High (theatre, anaesthesia, monitoring) | Moderate (dedicated machine) | Low (simple device) |
| **India availability** | Widely available in tertiary centers | Available in some tertiary/private centers | Research/experimental only |
| **MHCA 2017 relevance** | Sections 94–95 govern consent explicitly | No specific provision | No specific provision |

**EXAM PEARL**

The ECT vs rTMS comparison is one of the most commonly asked "compare and contrast" questions. Three key differentiating axes: (1) **efficacy** (ECT superior in severe illness); (2) **cognitive effects** (rTMS has none); (3) **anesthesia requirement** (ECT yes; rTMS no).

## TABLE 5

### Thiopentone vs Propofol for ECT Anaesthesia

| PARAMETER | THIOPENTONE (THIOPENTAL SODIUM) | PROPOFOL |
|---|---|---|
| **Drug class** | Barbiturate | Alkylphenol |
| **Dose for ECT** | 2–4 mg/kg IV | 1–2 mg/kg IV |
| **Onset** | 30–45 seconds | 30–45 seconds |
| **Duration** | ~5–10 minutes | ~5–10 minutes |
| **Effect on seizure threshold** | Minimal to slight elevation | **Raises seizure threshold** (may shorten seizure) |
| **Effect on seizure duration** | Minimal effect | May shorten EEG seizure duration |
| **Antiemetic effect** | None | **Yes, reduces post-ECT nausea** |
| **Recovery quality** | Standard | **Smoother recovery; less agitation** |
| **Cardiovascular effect** | More hypotension | Less hypotension |
| **Post-ECT agitation** | More common | Less common |
| **Availability in India** | Widely available; traditional gold standard | Widely available; increasingly preferred |
| **Dose adjustment needed** | Standard | May need higher ECT dose to achieve adequate seizure |
| **Preferred in India** | Traditional choice | Increasingly preferred; esp. for recovery quality |
| **Preferred when** | Seizure threshold concern; need longer seizure | Recovery quality priority; nausea concern |

**EXAM PEARL**

Propofol raises seizure threshold, this means you may need a higher ECT stimulus to achieve an adequate seizure when using propofol compared to thiopentone. This is important when seizure quality is already borderline.

## TABLE 6

### Modified vs Unmodified ECT

| FEATURE | MODIFIED ECT | UNMODIFIED ECT |
|---|---|---|
| **General anaesthesia** | Yes (thiopentone or propofol) | No |
| **Muscle relaxant** | Yes (succinylcholine) | No |
| **Supplemental oxygen** | Yes (100% O2 via bag-mask) | No |
| **Visible motor seizure** | Minimal (bite block and isolated limb only) | Full generalised tonic-clonic seizure |
| **Fracture risk** | Negligible | Significant (compression fractures, shoulder dislocation) |
| **Aspiration risk** | Managed (NPO protocol + oxygen) | Present |
| **Cardiovascular monitoring** | ECG + oximetry + BP | Basic or none |
| **EEG monitoring** | Standard | Not standard |
| **Isolated limb technique** | Used routinely | Not applicable |
| **Humane standard** | Yes, current global standard | Ethically questionable |
| **MHCA 2017 position** | Strongly implied as the required standard | Not explicitly banned, but incompatible with humane treatment mandate |
| **Resource requirement** | Higher (anaesthesia team, monitoring) | Lower (used in low-resource settings) |
| **Current Indian practice** | Standard in all accredited centers | Practiced in some under-resourced settings |
| **Patient experience** | No awareness during procedure | Frightening; full awareness of seizure |

**EXAM PEARL**

MHCA 2017 does not explicitly ban unmodified ECT but mandates treatment in a "safe, humane, and dignified manner." Practically, unmodified ECT cannot meet this standard. Any exam question about "ethical ECT" must reference modified ECT as the only acceptable form.

## TABLE 7

### Telepsychiatry vs In-Person Psychiatry

| PARAMETER | TELEPSYCHIATRY | IN-PERSON PSYCHIATRY |
|---|---|---|
| **Medium** | Video/audio/text via digital platform | Physical clinical setting |
| **MSE completeness** | Partial, appearance, behaviour, speech, affect, thought, cognition (partial); cannot assess gait, tremors, EPS fully | Complete, all domains |
| **Physical examination** | Not possible | Possible, vital signs, neurological, EPS, tardive dyskinesia |
| **Psychometric testing** | Most validated scales can be administered; some require in-person standardization | Full validated administration |
| **Emergency response** | Limited, cannot ensure physical safety; relies on emergency contact information | Direct intervention possible |
| **Schedule X prescribing** | **Not permitted (MoHFW 2020)** | Permitted with appropriate documentation |
| **Schedule H/H1 prescribing** | Permitted | Permitted |
| **First consultation (new patient)** | Restricted, in-person preferred; telemedicine acceptable for follow-up | Preferred for new patients |
| **Therapeutic alliance** | Comparable to in-person (RCT evidence) | Standard |
| **Access for rural/remote patients** | **Superior**, overcomes geographic barriers | Limited by distance |
| **Confidentiality risks** | Higher, third parties may be present in patient's home | Controlled clinical environment |
| **Documentation standard** | Same as in-person under MHCA 2017 | Standard |
| **Cost to patient** | Generally lower (no travel) | Travel + consultation costs |
| **Infrastructure** | Patient needs device + internet | Clinical setting required |
| **Digital divide** | Significant barrier for rural/elderly/low-literacy | Not applicable |
| **Legal jurisdiction** | Ambiguous for cross-state practice | Clear |

| PARAMETER | TELEPSYCHIATRY | IN-PERSON PSYCHIATRY |
|---|---|---|
| **Evidence quality (depression, anxiety)** | Non-inferior to in-person (multiple RCTs) | Gold standard |
| **PG exams model** | Hub-and-spoke; validated in rural Karnataka | Standard tertiary care model |

**EXAM STRATEGY**

Telepsychiatry questions almost always test: (1) the Schedule X prohibition; (2) access equity argument; (3) limitations (emergency management, physical examination). Cover all three in your answer.

## TABLE 8

### NMHP vs DMHP

| PARAMETER | NATIONAL MENTAL HEALTH PROGRAMME (NMHP) | DISTRICT MENTAL HEALTH PROGRAMME (DMHP) |
|---|---|---|
| **Level** | National policy framework | District-level operational implementation |
| **Launched** | 1982 (revised 2003, 2017) | 1996 (pilot, Bellary, Karnataka) |
| **Authority** | Ministry of Health and Family Welfare | State health departments + central support |
| **Scope** | Sets national vision, goals, funding, components | Delivers services at district level |
| **Target** | All mental illness in India | Primarily severe mental illness + suicide prevention at district level |
| **Components** | DMHP, MCRCs, Centres of Excellence, HRD, IEC, rehabilitation | OPD/IPD at district hospital; school/college MH; training PHC workers; IEC; drug supply |
| **Core team** | Policy and programme officers at national/state level | District psychiatrist + clinical psychologist + psychiatric social worker + psychiatric nurse (1 each) |
| **Tertiary component** | MCRCs (Medical College Resource Centres) + Centres of Excellence (PG exams, LGB) | Referral pathway to MCRCs/CoEs |
| **Funding** | Central government (NHM) | Central + state matching |

| PARAMETER | NATIONAL MENTAL HEALTH PROGRAMME (NMHP) | DISTRICT MENTAL HEALTH PROGRAMME (DMHP) |
|---|---|---|
| **Manpower development** | Funds PG training seats, faculty positions | Uses trained manpower |
| **IEC** | National campaigns, media, anti-stigma | District-level awareness camps |
| **Key weakness** | Implementation gaps; state-level variability | Severe manpower shortage (~0.3 psychiatrists/100,000) |
| **Pilot location** | National (launched from Delhi) | Bellary, Karnataka (1996) |
| **Coverage goal** | All states and UTs | All districts (under 12th Five Year Plan) |

EXAM PEARL

Remember: NMHP (1982) = national framework. DMHP (1996, Bellary) = district delivery arm. The DMHP is the operational expression of NMHP goals. The critical manpower figure: India has ~0.3 psychiatrists per 100,000 population vs WHO's recommended minimum of 1 per 10,000.

## TABLE 9

### ECT Anesthesia Options: Full Comparison

WIDE COMPARISON · LANDSCAPE

| AGENT | CLASS | DOSE | SEIZURE THRESHOLD | RECOVERY | AVAILABILITY INDIA | PREFERRED WHEN |
|---|---|---|---|---|---|---|
| **Thiopentone** | Barbiturate | 2–4 mg/kg | Minimal effect | Standard | Widely available | Traditional standard; when seizure quality is borderline |
| **Propofol** | Alkylphenol | 1–2 mg/kg | **Raises** (shortens seizure) | Smoother; antiemetic | Widely available | Recovery priority; nausea concern |
| **Ketamine** | NMDA antagonist | 1–2 mg/kg | **Lowers** (may augment seizure) | Dysphoric emergence | Available | Augmenting difficult seizures; TRD (own antidepressant properties) |
| **Etomidate** | Imidazole | 0.2–0.3 mg/kg | Minimal elevation | Myoclonus common | Available | Haemodynamically fragile patients |
| **Methohexital** | Barbiturate | 0.75–1 mg/kg | **Lowers** (preferred in USA) | Standard | Not available in India | USA gold standard; unavailable here |

CLINICAL ANCHOR

If seizure quality is poor (short duration, no postictal suppression), switch from propofol to thiopentone or ketamine. Ketamine also has intrinsic antidepressant properties via NMDA antagonism, emerging use in augmenting ECT.

## TABLE 10

### Postpartum Psychosis vs Postpartum Blues vs Bipolar Disorder First Episode (Differential Diagnosis Comparison)

| FEATURE | PPP | BABY BLUES | BIPOLAR I (NON-POSTPARTUM FIRST EPISODE) |
|---|---|---|---|
| **Onset** | Days 1–14 postpartum | Days 1–5 postpartum | Variable; no postpartum link |
| **Confusion** | Cardinal feature | Absent | Usually absent |
| **Mood instability** | Rapid fluctuations (hours) | Labile (milder) | Episode-based (days to weeks) |
| **Psychosis** | Present | Absent | Present in severe mania / depression |
| **Duration** | Days–weeks (requires treatment) | Resolves by day 14 (no treatment) | Weeks to months |
| **Bipolar link** | 50–80% subsequently diagnosed bipolar | None | Is the diagnosis |
| **Recurrence with next delivery** | 25–50% without prophylaxis | Low | Depends on bipolar course |
| **Lithium prophylaxis** | Indicated post-episode for next pregnancy | Not indicated | Standard maintenance |
| **ECT role** | Yes, early in severe PPP | Not applicable | Yes, for severe mania or depression |

EXAM PEARL

PPP is considered by many to be a manifestation of Bipolar I disorder, the postpartum period is the highest-risk window for bipolar first episodes and relapses. Lifetime lithium prophylaxis should be discussed after a PPP episode.

# PYQ Frequency Analysis

**Sources:** PG exams MD Psychiatry question papers (compiled), PG exams entrance PYQs. Pattern analysis based on 17+ years of question data.

## SECTION 1: FREQUENCY HEATMAP

### Overall Topic Frequency (All Sources Combined)

| TOPIC | FREQUENCY | PRIORITY |
|---|---|---|
| ECT, indications and technique | Very High | P1 |
| ECT, cognitive side effects | High | P1 |
| Postpartum psychosis, features and management | High | P1 |
| ECT consent under MHCA 2017 | High | P1 |
| Bilateral vs RUL ECT | High | P1 |
| Postpartum depression, EPDS and management | High | P1 |
| Drugs safe in breastfeeding | High | P1 |
| ECT, mechanism of action | Moderate–High | P2 |
| ECT in pregnancy | Moderate–High | P2 |
| Telepsychiatry, framework and limitations | Moderate–High | P2 |
| rTMS, mechanism and indications | Moderate | P2 |
| DMHP structure and components | Moderate | P2 |
| Modified vs unmodified ECT | Moderate | P2 |
| Maintenance ECT | Moderate | P2 |
| Baby blues vs PPD vs PPP (comparison) | Moderate | P2 |
| Teratogenicity of mood stabilizers | Moderate | P2 |

| TOPIC | FREQUENCY | PRIORITY |
|---|---|---|
| NMS, diagnosis and management | ▇▇▇ Moderate | P2 |
| NMHP vs DMHP | ▇▇ Low–Moderate | P3 |
| VNS / DBS / tDCS | ▇▇ Low–Moderate | P3 |
| PMDD | ▇▇ Low | P3 |
| Cultural psychiatry / culture-bound syndromes | ▇ Low | P3 |

# SECTION 2: QUESTION-BY-QUESTION PYQ LOG

## ECT: Indications and Technique

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recent | "Describe the indications and technique of ECT" | 10 | Long answer, appears almost every alternate year |
| Recent | "What are the indications for ECT? Discuss the procedure in detail." | 10 | Identical to above, learn one master answer |
| Recent | "Enumerate indications of ECT. Describe the procedure step by step." | 10 | Same pattern |
| Older | "What is ECT? Describe the procedure and its complications." | 10 | Complications = cognitive + cardiovascular; know both |
| Older | "Briefly describe ECT technique" | 5 | Short answer version, focus on procedure only |
| Older | "What are the contraindications of ECT?" | 5 | Absolute vs relative; know PARIS mnemonic |
| Older | "What are the advantages of brief pulse over sine wave ECT?" | 5 | Compare table required |

EXAM STRATEGY

ECT indications + technique is the single most reliably appearing long answer in Paper III. Write this as a 2-part answer: (1) indications (primary/secondary/special populations, use SAD CAMP); (2) procedure (workup → anaesthesia → electrode placement → seizure adequacy → course). A well-structured 10-marker should be 800–1000 words with at least one table.

## ECT: Consent Under MHCA 2017

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Very recent | "Discuss the consent process for ECT under the Mental Health Care Act 2017" | 5 | Has appeared since MHCA enacted (2017 onwards) |
| Very recent | "What does the MHCA 2017 say about ECT? Describe Sections 94 and 95." | 5 | Direct statutory question |
| Very recent | "Can ECT be given without consent? Discuss." | 5 | Tests knowledge of emergency provision |
| Very recent | "ECT in minors, legal position in India" | 3–5 | One-liner or short answer; absolute prohibition key fact |

EXAM PEARL

Since MHCA 2017 came into force, every exam cycle has included at least one question on ECT consent. The two facts you cannot miss: (1) emergency ECT requires **second psychiatrist certification**; (2) ECT is **absolutely prohibited under 18** (Section 95). These are the two testable facts examiners return to repeatedly.

## ECT: Cognitive Side Effects

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recent | "Describe the cognitive side effects of ECT and their management" | 5–10 | High-frequency; appears as both long and short answer |
| Recent | "What are the adverse effects of ECT?" | 5 | Broader; include cognitive + cardiovascular + headache + myalgia |

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Older | "How can you minimize cognitive side effects of ECT?" | 5 | Management-focused; RUL + ultra-brief pulse answer |
| Older | "Distinguish between anterograde and retrograde amnesia in ECT" | 3 | Definition + comparison |

**EXAM STRATEGY**

Structure: (1) Three types, post-ictal confusion (immediate; self-limiting); anterograde (during course; resolves); retrograde (most distressing; partial permanent loss possible). (2) Risk factors worsening cognition. (3) Management, RUL + ultra-brief pulse + monitoring. This 3-part structure reliably scores full marks.

## Bilateral vs Right Unilateral ECT

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recent | "Compare bilateral and right unilateral ECT" | 5 | Table format; 6x threshold fact is key |
| Recent | "What are the advantages of RUL over bilateral ECT?" | 5 | Cognitive advantage; dose-response nuance |
| Older | "Write a note on electrode placement in ECT" | 5 | All three placements; positions; cognitive risk |

**EXAM PEARL**

The 6x seizure threshold requirement for RUL ECT to match bilateral ECT efficacy is the single most-tested numerical fact about electrode placement. If you remember nothing else about RUL, remember this.

## ECT in Pregnancy

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recent | "How would you modify ECT technique in a pregnant patient?" | 5 | Modification table; risks; obstetric monitoring |

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recent | "What are the indications and precautions for ECT in pregnancy?" | 5 | Indications (first trimester preference) + modifications |
| Older | "Discuss the management of severe depression in pregnancy" | 10 | Broader; ECT is part of the answer |

## Postpartum Psychosis

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recent | "Describe the clinical features, differential diagnosis, and management of postpartum psychosis" | 10 | Classic long answer |
| Recent | "What is postpartum psychosis? How is it managed?" | 5–10 | Most common form of the question |
| Recent | "Discuss infanticide risk in postpartum psychiatric disorders" | 5 | Risk assessment; PPP vs PPD intrusive thoughts |
| Older | "Differentiate postpartum blues, postpartum depression, and postpartum psychosis" | 5 | Three-way comparison table |
| Older | "What are the organic causes of postpartum psychosis?" | 3–5 | SETS WE mnemonic |
| Older | "Management of puerperal psychosis" | 5 | Drug management focus |

**EXAM STRATEGY**

For PPP long answers: (1) onset/prevalence; (2) clinical features, emphasize confusion and rapid fluctuations; (3) organic differential (SETS WE); (4) risk assessment (infanticide); (5) management (inpatient → investigations → pharmacology → ECT → breastfeeding considerations → relapse prevention with lithium). This structure covers 10 marks.

## Postpartum Depression and EPDS

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| **Recent** | "Describe the Edinburgh Postnatal Depression Scale" | 5 | Structure, scoring, cut-off, Item 10 |
| **Recent** | "How would you screen for and treat postpartum depression?" | 5–10 | EPDS + risk factors + sertraline |
| **Older** | "What are the risk factors for postpartum depression?" | 3–5 | List question |
| **Older** | "Drug treatment of postpartum depression in a breastfeeding mother" | 5 | Sertraline; Hale's categories |

## Drugs Safe in Breastfeeding

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| **Recent** | "Which psychotropic drugs are safe during breastfeeding? Discuss." | 5 | Table by class; Hale's categories |
| **Recent** | "A lactating mother needs antidepressant therapy. What would you prescribe?" | 5 | Sertraline-focused; clinical reasoning |
| **Older** | "Discuss the use of lithium in breastfeeding" | 3 | Infant monitoring; L4; practical management |
| **Older** | "What are the risks of antipsychotics in breastfeeding?" | 3 | Olanzapine preferred; clozapine avoided |

**EXAM PEARL**

"Drugs in breastfeeding" questions expect a structured table by drug class. Always lead with sertraline (L2, first-line for depression) and olanzapine (L2, first-line antipsychotic). Always mention that fluoxetine (L3) should be avoided due to accumulation.

## rTMS

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| **Recent** | "Write a note on rTMS" | 5 | Mechanism + parameters + indications + advantages over ECT |
| **Recent** | "Compare ECT and rTMS" | 5 | Table format; efficacy, cognition, anesthesia axes |
| **Older** | "What is theta burst stimulation?" | 3 | Brief; iTBS vs cTBS; shorter duration |

## Telepsychiatry

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| **Very recent (post-COVID)** | "Write a note on telepsychiatry" | 5 | Definition + legal framework + evidence + limitations |
| **Very recent** | "What are the guidelines for telepsychiatry in India?" | 5 | MoHFW 2020; Schedule X prohibition; MHCA link |
| **Very recent** | "Discuss the limitations of telepsychiatry" | 3–5 | Limitations table; physical exam; emergency; digital divide |

**EXAM STRATEGY**

Telepsychiatry is a post-COVID addition that has appeared consistently since 2020. Key points: (1) MoHFW Telemedicine Practice Guidelines 2020; (2) Schedule X cannot be prescribed; (3) PG exams hub-and-spoke model; (4) limitations, physical examination, emergency, digital divide, confidentiality.

## DMHP

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| **Older/recurring** | "Write a note on DMHP" | 5 | Structure; services; pilot at Bellary |
| **Older/recurring** | "What are the components of the National Mental Health Programme?" | 5 | NMHP framework; DMHP as component |

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Older | "What is the role of a psychiatrist in community mental health in India?" | 10 | DMHP; NMHP; stigma; training PHC workers |

## Modified vs Unmodified ECT

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Older | "Compare modified and unmodified ECT" | 5 | Table; anaesthesia; fracture risk; MHCA |
| Older | "What modifications are made in modern ECT to make it safer?" | 5 | Lists all modifications systematically |

## NMS

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recurring | "Describe the clinical features and management of NMS" | 5–10 | FEVER mnemonic; dantrolene + bromocriptine; ECT |
| Recurring | "Differentiate NMS from serotonin syndrome" | 5 | Side-by-side comparison |
| Older | "What is the role of ECT in NMS?" | 3 | After medical stabilization; dopaminergic mechanism |

## Teratogenicity

| YEAR (APPROX.) | QUESTION | MARKS | PATTERN |
|---|---|---|---|
| Recurring | "Discuss teratogenicity of mood stabilizers" | 5 | Valproate (highest) → lithium → carbamazepine → lamotrigine |
| Recurring | "What are the risks of valproate in pregnancy?" | 3–5 | Neural tube defects; cognitive deficit; folic acid |
| Older | "Safe drugs in pregnancy for bipolar disorder" | 5 | Lamotrigine preferred; lithium with monitoring |

# SECTION 3: MARK ALLOCATION PATTERNS

## Long Answer (10 marks): ECT & Postpartum Topics

| QUESTION TYPE | EXPECTED STRUCTURE | MARK DISTRIBUTION |
|---|---|---|
| **ECT indications + technique** | Indications (4) + Procedure (5) + Complications brief (1) | 4 + 5 + 1 |
| **Postpartum psychosis (full)** | Features (3) + Differential (2) + Management (4) + Risk assessment (1) | 3 + 2 + 4 + 1 |
| **ECT cognitive effects** | Types (3) + Risk factors (2) + Management strategies (3) + Monitoring (2) | 3 + 2 + 3 + 2 |

## Short Answer (5 marks): Common Patterns

| QUESTION TYPE | EXPECTED COMPONENTS | MARKS PER COMPONENT |
|---|---|---|
| **EPDS** | Definition + structure (2) + scoring/cutoff (2) + Item 10 importance (1) | 2 + 2 + 1 |
| **Drugs in breastfeeding** | Hale's categories (1) + table by class (3) + practical recommendation (1) | 1 + 3 + 1 |
| **rTMS** | Mechanism (1) + parameters (2) + indications (1) + vs ECT (1) | 1 + 2 + 1 + 1 |
| **Telepsychiatry** | Definition (1) + legal framework (2) + limitations (2) | 1 + 2 + 2 |
| **DMHP** | Background/pilot (1) + team (2) + services (2) | 1 + 2 + 2 |
| **Modified ECT** | Definition (1) + anaesthesia (2) + advantages over unmodified (2) | 1 + 2 + 2 |

## Very Short / One-liner (2–3 marks)

QUESTION · EXPECTED ANSWER

**"What is the seizure threshold dose for RUL ECT?"** 6x seizure threshold

**"Name the muscle relaxant used in ECT"** Succinylcholine (suxamethonium)

**"What section of MHCA 2017 prohibits ECT in minors?"** Section 95

**"EPDS cutoff for PPD screening"** ≥10 (some guidelines ≥13)

**"First-line antidepressant in breastfeeding"** Sertraline

**"DMHP was first piloted at?"** Bellary, Karnataka (1996)

**"What is the safest mood stabilizer in pregnancy?"** Lamotrigine

**"Name the induction agent that raises seizure threshold in ECT"** Propofol

**"Duration of adequate motor seizure in ECT"** ≥25 seconds

**"What is iTBS?"** Intermittent theta burst stimulation, 600 pulses in 3 minutes; equivalent to 10 Hz rTMS

**"Schedule X drugs cannot be prescribed via?"** Telemedicine

**"Who introduced ECT?"** Cerletti and Bini (1938)

## SECTION 4: PREDICTION FOR UPCOMING EXAM CYCLE

> EXAM STRATEGY
>
> Based on frequency analysis and recency of MHCA 2017 (enacted 2018, fully implemented by 2020), the following topics have the highest likelihood of appearing:

### Near-Certain (P1: Must Prepare Fully)

1. **ECT indications and technique** (10 marks), appears almost every cycle
2. **ECT consent under MHCA 2017** (5 marks), mandatory post-2018
3. **Postpartum psychosis** (10 marks), high-frequency clinical topic
4. **Drugs safe in breastfeeding** (5 marks), evergreen clinical question
5. **Cognitive side effects of ECT** (5 marks), consistently tested

### Very Likely (P2: Prepare Thoroughly)

1. **Bilateral vs RUL ECT** (5 marks), comparison format
2. **EPDS** (5 marks), postpartum psychiatry anchor
3. **rTMS, mechanism and parameters** (5 marks), growing frequency
4. **Telepsychiatry** (5 marks), post-COVID mandatory addition
5. **ECT in pregnancy** (5 marks), practical clinical scenario
6. **Teratogenicity of mood stabilizers** (5 marks), perennial

### Possible (P3: Overview Preparation)

1. **DMHP structure** (5 marks)

2. **Modified vs unmodified ECT** (5 marks)
3. **NMS management** (5 marks)
4. **Maintenance ECT** (3–5 marks)

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## SECTION 5: ANSWER PLANNING GUIDE

### 10-Mark Answer Blueprint: ECT Indications and Technique

### 10-Mark Answer Blueprint: Postpartum Psychosis

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## SECTION 6: COMMONLY CONFUSED PAIRS (HIGH EXAM RISK)

PAIR · KEY DISTINGUISHING FACT

**Anterograde vs retrograde amnesia in ECT** Anterograde = cannot make NEW memories (during course, resolves). Retrograde = LOSES OLD memories (autobiographical; may be permanent)

**Baby Blues vs PPD onset** Blues = days 1–5, resolves by day 14. PPD = 2–8 weeks. **If still present at day 15 → reassess for PPD**

**PPP vs Schizophrenia first episode** PPP = confusion + rapid fluctuations + postpartum onset. Schizophrenia = slower onset, no confusion, no postpartum link

**RUL at 2.5x vs 6x threshold** At 2.5x: RUL is **inferior** to bilateral. At 6x: RUL equals bilateral in efficacy. The dose matters enormously

**Thiopentone vs propofol effect on seizure** Thiopentone = minimal effect on threshold. Propofol = **raises** threshold (may shorten seizure)

**NMS vs Serotonin Syndrome** NMS = slow onset (days), lead-pipe rigidity, caused by D2 blockers, no clonus. SS = fast onset (hours), clonus + hyperreflexia + myoclonus, caused by serotonergic excess

**Schedule H/H1 vs Schedule X (telemedicine)** H/H1 = CAN prescribe via telemedicine. X = **CANNOT** (benzodiazepines, opioids, stimulants)

**EPDS cutoff ≥10 vs ≥13** Both appear in different sources. Use ≥10 (NICE guidelines). Know that ≥13 = original Edinburgh Health Board. Mention both in exam

**NMHP vs DMHP** NMHP (1982) = national policy. DMHP (1996, Bellary) = district operational arm

**Valproate vs lamotrigine in pregnancy** Valproate = highest teratogenic risk (avoid). Lamotrigine = preferred mood stabilizer (lowest risk of anticonvulsants in pregnancy)

# Quick Review

**Sources:** Kaplan & Sadock 12th ed., APA ECT Task Force 3rd ed., MHCA 2017, Stahl's 5th ed., Telemedicine Practice Guidelines 2020

> **EXAM STRATEGY**
> Work through this list actively, cover the answer, attempt recall, then check. Flag any Q you hesitate on and return to it. Second pass on flagged items only. Target: zero hesitation on all 30 before exam day.

---

**Q1.** Who introduced ECT, and in what year?

**Answer:**

Ugo Cerletti and Lucio Bini, Rome, 1938. The original (incorrect) rationale was the supposed biological incompatibility between epilepsy and schizophrenia.

---

**Q2.** Name the two conditions most commonly cited as absolute contraindications to ECT.

**Answer:**

(1) Pheochromocytoma, catecholamine surge during seizure is potentially fatal.

(2) Raised intracranial pressure, seizure further elevates ICP, risking herniation.

The APA technically states there are no absolute contraindications, but these two are universally expected in exam answers.

---

**Q3.** What is the minimum adequate motor seizure duration in the isolated limb technique?

**Answer:**

≥25 seconds (motor). EEG criterion: ≥20–25 seconds with postictal suppression. Both motor AND EEG adequacy should be confirmed. Seizures shorter than 25 seconds (motor) are considered inadequate regardless of clinical appearance.

---

**Q4.** What dose of ECT stimulus is required for right unilateral (RUL) ECT to achieve efficacy equivalent to bilateral ECT?

**Answer:**

6x the seizure threshold. At lower doses (e.g., 2.5x), RUL ECT is clearly inferior to bilateral ECT in antidepressant efficacy. This dose-response relationship is the single most-tested numerical fact about electrode placement.

---

**Q5.** What does Section 95 of the Mental Health Care Act 2017 state about ECT?

**Answer:**

ECT is **absolutely prohibited for all persons under 18 years of age**. There are no exceptions, not even in life-threatening emergencies. This is one of the few absolute prohibitions in the entire Act.

---

**Q6.** Under MHCA 2017, when may ECT be administered without the patient's informed consent?

**Answer:**

Only in a genuine life-threatening emergency, and only after a **second psychiatrist certifies** the necessity. Full documentation is mandatory. As soon as the patient regains decision-making capacity, they must be informed of what was done and why.

---

**Q7.** Name the induction agent used in ECT that raises the seizure threshold and may shorten seizure duration.

**Answer:**

**Propofol.** Because it raises seizure threshold, a higher stimulus energy may be needed when propofol is used compared to thiopentone. It offers advantages of smoother recovery and antiemetic effect, but may compromise seizure quality at standard doses.

---

**Q8.** What is the purpose of the isolated limb technique in ECT?

**Answer:**

A blood pressure cuff is inflated above systolic pressure on one forearm or ankle **before** succinylcholine is injected. The muscle relaxant cannot reach that limb, so its muscles contract visibly during the seizure. This allows direct visual monitoring of motor seizure onset, quality, generalization, and duration.

---

**Q9.** Name the three electrode placements used in ECT, from highest to lowest cognitive side effect burden.

**Answer:**

(1) **Bilateral (bitemporal)**, highest cognitive effects, highest efficacy, fastest response.

(2) **Bifrontal**, intermediate.

(3) **Right unilateral (RUL)**, least cognitive effects (stimulates non-dominant hemisphere), equivalent efficacy only at 6x seizure threshold.

---

**Q10.** What is the difference between brief-pulse and ultra-brief pulse ECT?

**Answer:**

**Brief-pulse:** pulse width 0.5–2.0 ms; current standard for bilateral ECT; moderate cognitive effects.

**Ultra-brief pulse:** pulse width ≤0.3 ms (typically 0.2 ms); significantly fewer cognitive effects, especially retrograde amnesia; slightly lower efficacy in some populations; best paired with RUL placement. Sine-wave ECT (continuous, no pulse) is now completely abandoned due to excessive cognitive side effects.

---

**Q11.** State the onset, prevalence, and duration of postpartum blues, postpartum depression, and postpartum psychosis.

**Answer:**

| DISORDER | ONSET | PREVALENCE | DURATION |
|---|---|---|---|
| **Baby Blues** | Days 1–5 (peak day 3–5) | 50–70% | Resolves by day 14 |
| **PPD** | 2–8 weeks post-delivery | 10–15% | Weeks–months untreated |
| **PPP** | Within 2 weeks (often days 3–14) | 1–2 per 1,000 | Days–weeks without treatment |

---

**Q12.** What is the cardinal clinical feature that distinguishes postpartum psychosis from other postpartum disorders and from first-episode schizophrenia?

**Answer:**

**Confusion and disorientation**, often the first sign in PPP, disproportionate to the clinical picture. Combined with rapid mood fluctuations within hours (elation to despair), this gives PPP a delirious-manic quality not seen in baby blues, PPD, or typical schizophrenia. Always exclude organic causes (sepsis, eclampsia, thyroid, electrolytes) when confusion is prominent.

---

**Q13.** Name the six organic causes to exclude before diagnosing postpartum psychosis (use SETS WE).

**Answer:**

- **S**, Sepsis (puerperal)
- **E**, Eclampsia
- **T**, Thyroid (storm or autoimmune thyroiditis)
- **S**, Sheehan's syndrome (pituitary infarction)
- **W**, Wernicke's encephalopathy (thiamine deficiency)

- **E**, Electrolyte disturbance (Na+, Mg2+, Ca2+)

Also: cortical vein thrombosis (headache + focal signs → MRI).

---

**Q14.** What is the first-line antidepressant for a breastfeeding mother with postpartum depression, and why?

**Answer:**

**Sertraline** (Hale's LRC: L2). It has the most extensive safety data in breastfeeding: infant serum levels are undetectable or negligible in most studies, no adverse neonatal outcomes documented, and it is effective for PPD. Fluoxetine (L3) should be avoided due to its long half-life and accumulation of the active metabolite norfluoxetine in infant serum.

---

**Q15.** What are the EPDS cutoff scores, and what is special about Item 10?

**Answer:**

Score range: 0–30. Cutoff for probable PPD: **≥10** (NICE guidelines; some use ≥13, know both).

**Item 10** asks specifically about thoughts of self-harm or suicide. Any score >0 on Item 10 requires immediate clinical risk assessment regardless of the total EPDS score. It is a non-negotiable safety screen item independent of the total score.

---

**Q16.** Name three risk factors that increase the likelihood of developing postpartum depression.

**Answer:**

(Strongest/most testable):

1. **Personal history of depression or anxiety**, strongest predictor (RR 3–5x)
2. **Personal history of PPD**, 25–50% recurrence rate with subsequent deliveries
3. **Poor social support / relationship difficulties**

Others: antenatal depression, birth trauma, premature/ill infant, history of PMDD, domestic violence.

---

**Q17.** What is the bipolar disorder link with postpartum psychosis?

**Answer:**

PPP is strongly linked to Bipolar I disorder, 50–80% of women with PPP are subsequently diagnosed with bipolar disorder. PPP may represent the **first manifestation of Bipolar I** in many patients. Women with a confirmed bipolar diagnosis have a 25–50% risk of PPP with

each delivery without prophylaxis. Lithium started immediately post-delivery significantly reduces this risk.

---

**Q18.** State the mechanism of action of rTMS and the standard parameters for treating depression.

**Answer:**

**Mechanism:** Rapidly alternating magnetic field from a scalp coil induces focal electrical currents in underlying cortex (Faraday's law). High-frequency (≥10 Hz) = excitatory; low-frequency (≤1 Hz) = inhibitory. For depression: high-frequency left DLPFC stimulation restores hypoactive prefrontal activity and normalizes fronto-limbic connectivity.

**Parameters:** Left DLPFC target; 10 Hz; 120% resting motor threshold; 3,000 pulses/session; 20–30 sessions over 4–6 weeks (5 days/week).

---

**Q19.** What is theta burst stimulation and what is its main clinical advantage?

**Answer:**

A patterned rTMS protocol: 3 pulses at 50 Hz, repeated at 5 Hz.

**Intermittent TBS (iTBS):** excitatory, 600 pulses delivered in just **3 minutes** (vs 37 minutes for standard 10 Hz). FDA-approved; non-inferior to standard rTMS in RCTs. The main advantage is drastically reduced session duration, improving patient acceptance and clinic throughput.

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**Q20.** What drugs cannot be prescribed via telemedicine under the Telemedicine Practice Guidelines 2020 (India)?

**Answer:**

**Schedule X drugs**, these are controlled substances under the Drugs and Cosmetics Act:

- Benzodiazepines (diazepam, clonazepam, lorazepam, alprazolam)
- Opioids (morphine, codeine, tramadol-containing Schedule X formulations)
- Psychostimulants (methylphenidate, amphetamines)
- Sedative-hypnotics (zolpidem)

Schedule H and H1 drugs (antidepressants, antipsychotics, mood stabilizers) **can** be prescribed via telemedicine.

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**Q21.** Name the DMHP pilot site and year, and state the core team at district level.

**Answer:**

Pilot: **Bellary, Karnataka, 1996**.

Core district team (1 each):

- Psychiatrist
- Clinical Psychologist
- Psychiatric Social Worker
- Psychiatric Nurse
- Case Registry Officer

India has approximately 0.3 psychiatrists per 100,000 population, far below WHO's recommended 1 per 10,000.

---

**Q22.** Describe maintenance ECT: what is the standard tapering schedule?

**Answer:**

Maintenance ECT is used for relapse prevention after a successful acute ECT course.

Standard tapering schedule:

- Weeks 1–4: Once weekly
- Weeks 5–8: Fortnightly
- Month 3 onwards: Monthly (ongoing if needed)

Evidence: Kellner et al. (NEJM, 2006) showed M-ECT + nortriptyline was superior to nortriptyline alone in preventing relapse. M-ECT is evidence-based, not experimental. Serial cognitive monitoring is mandatory during M-ECT.

---

**Q23.** What are the clinical features of NMS? Use the FEVER mnemonic.

**Answer:**

- **F**, Fever (hyperthermia >38.5°C, can reach 41°C)
- **E**, Encephalopathy (altered consciousness, confusion to coma)
- **V**, Vital sign instability (tachycardia, labile BP, diaphoresis, tachypnea)
- **E**, Elevated CPK (>1000 U/L, often massively elevated) + elevated WBC
- **R**, Rigidity (lead-pipe, diffuse, cardinal sign)

Management: Stop antipsychotic → ICU → IV fluids → Dantrolene → Bromocriptine → ECT if severe/refractory.

---

**Q24.** What modifications are required when administering ECT to a pregnant patient?

**Answer:**

Key modifications:

1. Obstetric anaesthesiologist present

2. Fetal heart rate monitoring (from ≥16 weeks)
3. Uterine contraction monitoring
4. Left lateral tilt of operating table (aortocaval decompression)
5. Sodium citrate 30 mL orally before each session (aspiration risk)
6. Consider intubation if airway concerns
7. Tocolytic on standby (premature labour)
8. Succinylcholine dose adjustment (reduced plasma cholinesterase in pregnancy)
9. Minimize hyperventilation (fetal hypoxia risk)
10. Pre-procedure IV hydration

ECT is preferred over most psychotropics in first trimester for severe psychiatric illness.

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**Q25.** Which mood stabilizer carries the highest teratogenic risk, and what are its specific fetal effects?

**Answer:**

**Valproate (sodium valproate)**, highest risk of any mood stabilizer.

Specific risks:

- Neural tube defects: 1–4% (spina bifida, anencephaly)
- Cardiac defects (VSD, ASD)
- Fetal valproate syndrome (craniofacial features: thin upper lip, broad nasal bridge, epicanthal folds)
- Cognitive deficit: IQ reduction of 7–9 points vs matched controls (dose-dependent)
- Autism spectrum disorder: RR 3–5x background rate

Action: Avoid in all women of childbearing potential unless no other option. If essential, use lowest effective dose + folic acid 5 mg/day + detailed anomaly scan + informed consent.

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**Q26.** Compare NMS and serotonin syndrome on three key axes.

**Answer:**

| FEATURE | NMS | SEROTONIN SYNDROME |
|---|---|---|
| **Cause** | D2 antagonists (antipsychotics) | Serotonergic excess (SSRI + MAOI; SSRI + tramadol etc.) |
| **Onset** | Slow, days to weeks | Rapid, hours after drug change |
| **Neuromuscular signs** | Lead-pipe rigidity; no clonus | Clonus, hyperreflexia, myoclonus (neuromuscular excitability) |

Additional: Both cause hyperthermia + altered consciousness. NMS: elevated CPK, no clonus. SS: clonus is hallmark, less CPK elevation. Treatment: NMS → dantrolene + bromocriptine. SS → stop serotonergic drugs + cyproheptadine (5-HT2A antagonist).

---

**Q27.** What is Hale's L2 category, and name two L2 antidepressants and one L2 antipsychotic safe in breastfeeding?

**Answer:**

**L2 = Safer**, limited adverse effects observed in controlled studies; probably compatible with breastfeeding.

L2 antidepressants: **Sertraline** (first choice), **Paroxetine**, Nortriptyline.

L2 antipsychotic: **Olanzapine** (preferred in breastfeeding), Haloperidol.

Avoid: Fluoxetine (L3, accumulates), Clozapine (L3–4, agranulocytosis risk in infant).

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**Q28.** Describe the hub-and-spoke telepsychiatry model as implemented by PG exams.

**Answer:**

The PG exams model uses:

- **Hub:** PG exams, Bengaluru, provides specialist psychiatric consultation via video
- **Spokes:** District hospitals and primary health centres across rural Karnataka
- **First contact:** Trained ASHA workers and PHC doctors identify and initially manage patients locally; complex cases are escalated to the hub via video consultation
- **Validated in:** Rural Karnataka; adopted as a national reference model for telepsychiatry
- **Outcome:** Significantly improved access to specialist care without requiring tertiary-centre travel; reduced treatment gap in underserved areas

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**Q29.** What is PMDD and what is its first-line pharmacological treatment?

**Answer:**

**Premenstrual Dysphoric Disorder (PMDD)**, DSM-5 diagnosis. 5+ symptoms in the final week before menses, improving within days of menstrual onset, minimal/absent post-menstruation. Core symptoms: affective lability, irritability, depressed mood, anxiety. Prevalence: 3–8% of women of reproductive age. Must be documented prospectively over 2 menstrual cycles (DRSP scale).

Pathophysiology: Abnormal CNS sensitivity to normal cyclical fluctuations in allopregnanolone (progesterone metabolite), not a hormone deficiency.

**First-line treatment:** SSRIs, **sertraline**, fluoxetine (Sarafem), escitalopram. Can be given continuously or only in the **luteal phase** (day 14 to menses onset), luteal phase dosing is

effective and reduces side effects.

---

**Q30.** State three key limitations of telepsychiatry compared to in-person psychiatry that are clinically significant.

**Answer:**

(Most exam-relevant three):

1. **Cannot perform physical examination**, cannot assess extrapyramidal side effects, tardive dyskinesia, tremors, or monitor vital signs accurately. Critical for patients on antipsychotics or lithium.

1. **Emergency management is limited**, cannot ensure physical safety, remove means of self-harm, or directly call emergency services to the patient's location. Safety planning is less effective remotely.

1. **Schedule X drugs cannot be prescribed**, benzodiazepines, opioids, and stimulants are prohibited under MoHFW Telemedicine Practice Guidelines 2020. This significantly limits acute agitation management and ADHD prescribing via telemedicine.

Additional valid answers: digital divide (rural/elderly), confidentiality risk (third parties at home), non-verbal cue limitations.

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## RAPID-FIRE SINGLE-LINE RECALL

FACT · ANSWER

**ECT introduced by** Cerletti & Bini, 1938

**Absolute contraindications to ECT** Pheochromocytoma; raised ICP

**Minimum motor seizure duration** ≥25 seconds

**RUL ECT requires** 6x seizure threshold

**Section 95 MHCA 2017** ECT banned in under-18s, no exceptions

**Emergency ECT requires** Second psychiatrist certification

**Propofol effect on seizure threshold** Raises it (shortens seizure)

**Thiopentone effect on seizure threshold** Minimal

**Pre-ECT drug to withhold (BLAST)** Benzodiazepines, Lithium, Anticonvulsants, MAOIs (suxamethonium interaction), Theophylline

**Baby blues onset** Days 1–5; resolves by day 14

**PPD prevalence** 10–15%

**PPP prevalence** 1–2 per 1,000 deliveries

**PPP cardinal feature** Confusion and disorientation

**PPP bipolar link** 50–80% subsequently diagnosed bipolar

**EPDS items** 10 items; score 0–30

**EPDS cutoff** ≥10 (NICE); ≥13 (original)

**EPDS Item 10** Suicidal ideation, immediate assessment regardless of total

**First-line antidepressant in breastfeeding** Sertraline (L2)

**Avoid in breastfeeding (SSRI)** Fluoxetine (L3, accumulates)

**First-line antipsychotic in breastfeeding** Olanzapine (L2)

**Highest teratogenic risk mood stabilizer** Valproate

**Valproate neural tube defect risk** 1–4%

**Preferred mood stabilizer in pregnancy** Lamotrigine

**Lithium teratogenicity** Ebstein's anomaly (~0.1% absolute risk)

**rTMS target for depression** Left DLPFC

**rTMS frequency for depression** 10 Hz (high frequency, excitatory)

**rTMS intensity** 120% resting motor threshold

**iTBS duration vs standard rTMS** 3 minutes vs 37 minutes

**NMS hallmark investigation** CPK (creatine phosphokinase)

**NMS specific treatment** Dantrolene + Bromocriptine

**Serotonin syndrome hallmark sign** Clonus (absent in NMS)

**Schedule X cannot be prescribed via** Telemedicine

**DMHP pilot site and year** Bellary, Karnataka, 1996

**DMHP core team** Psychiatrist, clinical psychologist, PSW, psychiatric nurse (1 each)

**India psychiatrist density** ~0.3 per 100,000 population

**Maintenance ECT evidence** Kellner et al., NEJM 2006

**PMDD first-line treatment** SSRIs (sertraline, fluoxetine), continuous or luteal phase

**PPP recurrence risk (no prophylaxis)** 25–50% with next delivery

**Lithium post-PPP** Indicated for relapse prevention in subsequent pregnancies

# Index of Disorders & Topics

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# Weave.

*Psychiatry that listens before it prescribes.*

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