

Essentials for PG Pediatric Exam

OSCE ▪ Spotters ▪ Viva
Procedures

For DNB, MD, Diploma, MRCPCH Exams

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Forewords

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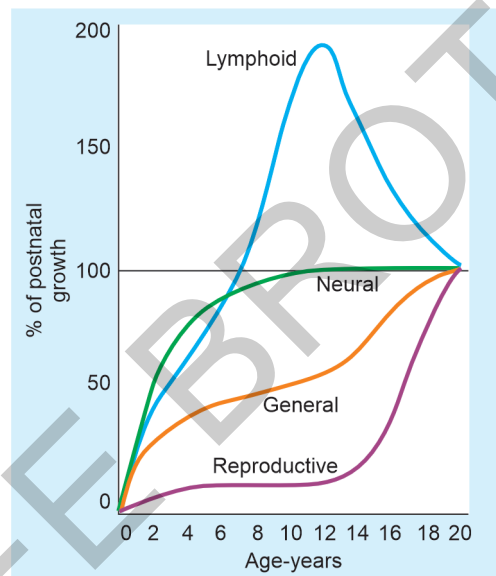
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Development and Psychiatry

QUESTIONS

Q-1.



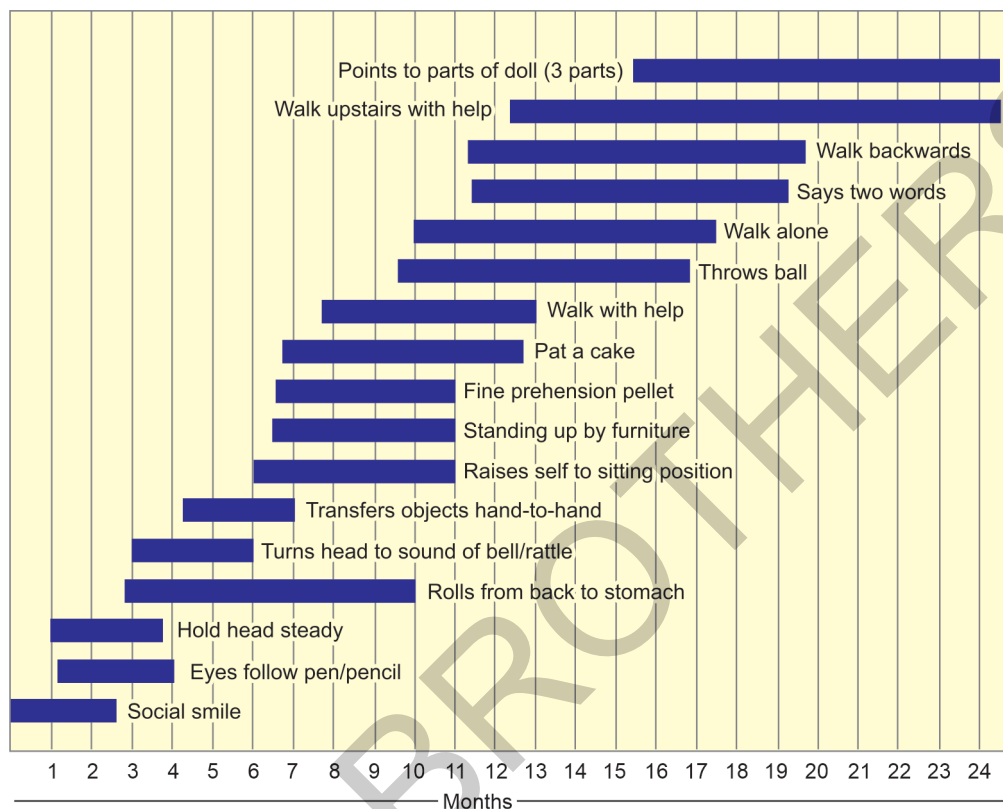
- A. What does it show?
 B. What is its name?
 C. Describe its interpretation.

Q-2.



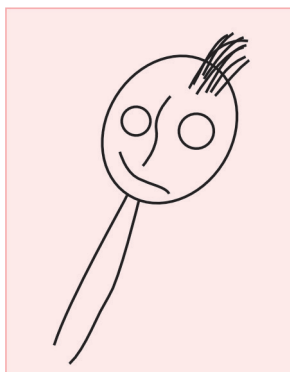
- A. What is the name of this kit used in child development clinic?
 B. What is the utility of this kit?
 C. What age is recommended to use this kit?
 D. What are the key features of this kit?
 E. Who developed this kit?

Q-3.



- What is the name of this development screening tool?
- At what age, this development screening tool can be used?
- What is the utility of this screening tool?
- How one should interpret this screening tool?
- What are the other developmental screening tools that can be used?

Q-4.



- What is this simple bedside test for assessing the cognition of a child called?
- Beyond what age can this test be used?
- What is the mental age of the child who has drawn this image? How will you calculate?

Q-5. A 2-year-old child is brought with concerns of notable to walk without support. He was delivered as a 32 weeks with a birth weight of 1.2 kg and required NICU care for about 5 weeks. His clinical observations is shown in below image.



- A. What does the picture show?
- B. Is there any significant point in the history responsible for this situation?
- C. What is your diagnosis?
- D. What is common MRI brain finding in these babies?
- E. What is the intellectual ability in this disorder, commonly seen?

Q-6. A 12-year-old girl came in OPD with complaints of weight loss for 6 months. She lost more than 10 kg over this period. She was consulted by multiple specialists and investigated extensively, but no medical cause was found. Parents informed avoidance of food, prefers vegetables and salad and following vigorous physical exercise. On psychological, she denied any cognition related to abnormal body image and fear of weight gain.

- A. What is probable diagnosis?
- B. What are the types of this disorders?
- C. What are differential diagnosis?
- D. What are the complications of this disorder?
- E. What symptoms and signs required hospitalization of this patient?

Q-7. A 5-year-old boy is brought with complaints that he does not sit in class room or at home, keeps running around, talks too much, not able to sustain attention on any work given, often easily distracted and forgetfulness for past 10 months. He has been diagnosed as attention deficit hyperactivity disorder (ADHD).

- A. What are the diagnostic tools for ADHD? What is the tool for Indian children?
- B. What are the differential diagnosis?
- C. What are the treatment modalities?
- D. What conditions should be excluded before starting the treatment?

Q-8. The following statements are pertaining to attention deficit hyperactivity disorder (ADHD), Write True/False.

- A. Impulsive behavior is a feature.
- B. Is associated with high rate of teenage pregnancy.
- C. Is associated with high rate of tic disorders.
- D. Is associated with higher rate of expulsion from school.
- E. May respond to treatment with stimulants such as amphetamines.

- Q-9. A 2.5-year-old child was brought in OPD by parents with complaints of impaired verbal response, plays alone, stereotype and restrictive behavioral problems.**
- A. What is probable diagnosis?
 - B. Which diseases are associated with this disorder?
 - C. What is the triad of symptoms required to label this disorder?
 - D. What is the pharmacotherapy for this condition?
- Q-10. A 9-month-old girl was brought as an emergency case with complaints that following crying, she suddenly stops breathing and lips become bluish followed by a seizure-like movement for few seconds and then becomes normal.**
- A. What is probable diagnosis?
 - B. What are the types of this disorder?
 - C. What are the differential diagnosis?
 - D. What is the management of this condition?
- Q-11. A 20-month-old boy is brought in the OPD with classical features of autistic spectrum disorder (ASD). Answer the following questions pertaining to the condition.**
- A. What are differential diagnosis?
 - B. What key features should be checked in his clinical examination?
 - C. What are the indications of radio-imaging of brain in ASD?
 - D. What are the principles of the treatment?
- Q-12. A 2-year-old boy was brought in OPD by parents with complaints of not responding to oral commands, not making eye contacts, not playing with other children, remains alone and repeats similar actions. It is observed since last 6 months.**
- A. What is probable diagnosis?
 - B. What is most consistent findings on his clinical examination in this disorder?
 - C. What drugs are approved for this disease?
- Q-13. A 6-year-old boy is brought with complaints of sudden and recurrent movements of eye blinking, jerking of neck and repeating his words often. This occurs several times in a day and has been present for 14 months. His development is normal and no fever or altered sensorium. There is no history of any drug intake.**
- A. What is most probable diagnosis?
 - B. What are the associated disorders with this condition?
 - C. What are differential diagnosis?
 - D. What are the treatment modalities?
- Q-14. A 14-year-old adolescent girl is brought by her mother with complaints of repetitive paroxysmal episodes for last 1 year. The events are variable but she develops sudden loss of consciousness and fall every time. The episode is classical with jerking movements of head, tight closing of eyes, open mouth and deep breathing. Her development is normal. There is no history of seizures in family. She has taken multiple antiepileptic drugs without any benefit. Clinical examination, including CNS is essentially normal. On deep probing, mother revealed the information regarding her separation from her husband.**
- A. What is most probable diagnosis?
 - B. What are the risk factors for this disorder?
 - C. How to manage her?
- Q-15. A 10-year-old boy is presented with complaints of difficulty in reading and writing for 2 years. He is not able to keep up with his classmates academically despite of special efforts by his teachers and tuition classes. His development, hearing and vision are normal. His family is stable.**
- A. What is the diagnosis?
 - B. What are possible comorbid conditions with this disorder?
 - C. What interventions should be done?

Q-16. Answer the following question pertaining to specific learning disability.

- A. Define specific learning disability.
- B. What is the most common specific learning disability?
- C. What is the etiology of this disorder?
- D. What are the features suggestive of specific learning disability?

Q-17. Define following developmental and behavioral disorders in children.

- | | |
|-------------------------|------------------------|
| A. Juvenile delinquency | B. Munchausen by proxy |
| C. Pica | D. Temper tantrum |
| E. Thumb-sucking | F. Stuttering |
| G. Enuresis | H. Encopresis |

Q-18. What is the age of development of motor milestones shown in images A, B, and C?



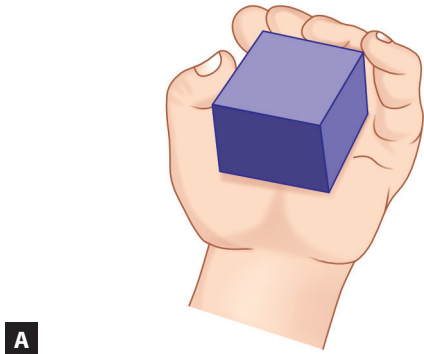
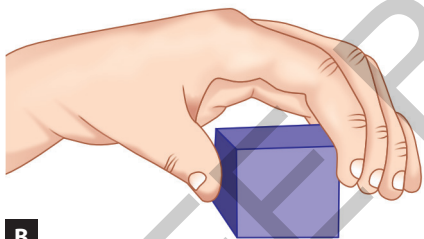
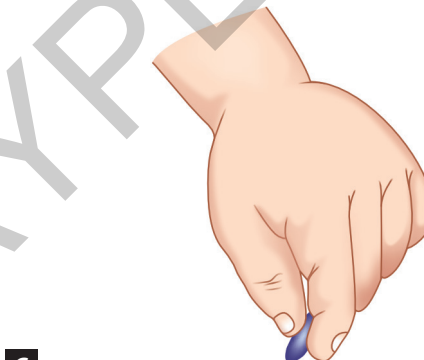
Q-19. What is the age of development of motor milestones as shown in images A, B, and C?



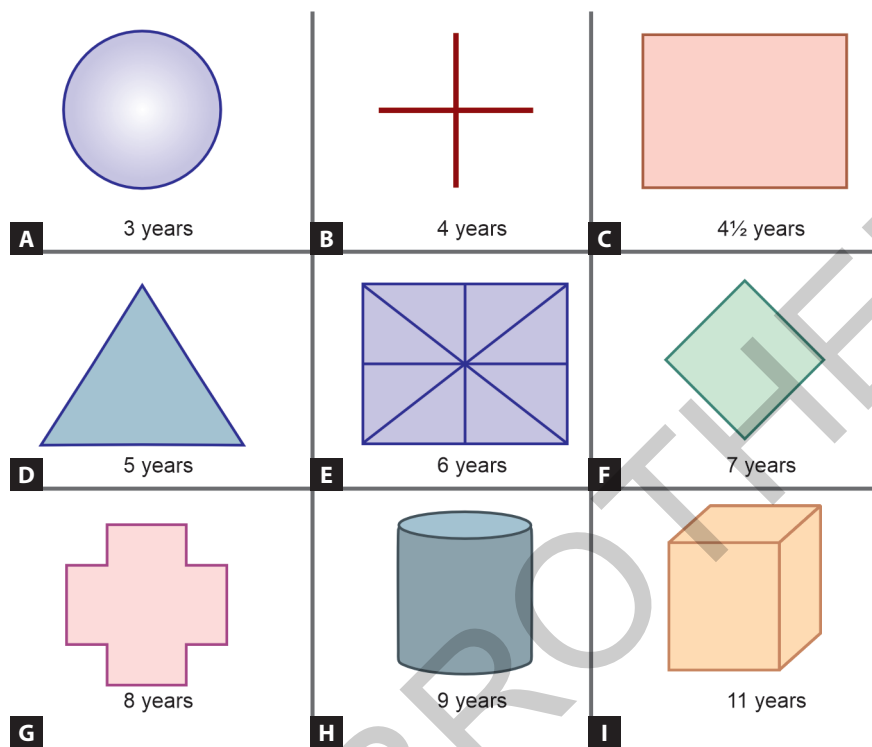
Q-20. What is the age of development of the child as shown in images A, B, C, D, and E?



Q-21. What is the age of development of different stages of grasp as shown in images A, B and C?

**A****B****C**

Q-22.



At what age different drawing skills develop as shown in images A, B, C, D, E, F, G, H, and I?

Q-23.



- What the examiner is trying to assess in this picture?
- At what age of the child do you expect this response?

ANSWERS

- A-1.** A. It shows pattern of growth curves of different structures (systems) in human body.
 B. Scammon's curves of systemic growth
 C.
 • Somatic growth follows a sigmoid curve with periods of rapid growth during infancy and puberty.
 • The postnatal brain growth primarily occurs in the first year of life so that at 1-year infant has 90% adult brain size, maximum growth in first 2 years of life.
 • Lymphoid growth starts after the age of 5 years, peaks during 6–9 years of age and declines steadily thereafter.
 • Gonadal development resulting in increasing size and function of reproductive organs starts after the onset of puberty (10–14 years).
- A-2.** A. DASII (Developmental Assessment Scale for Indian Infants)
 B. It is used to assess child's mental and motor development to identify developmental delays and to monitor interventions.
 C. From birth to 30 months
 D. *Key features of DASII:*
 • Uses Indian norms and indigenous material
 • Scores mental and motor factors separately
 • Includes items covering body control, locomotive manipulation, cognition, memory, social interactions and language
 E. It was developed by MS University, Vadodara, Gujarat.
- A-3.** A. Trivandrum Development Screening Chart (TDSC)
 B. 0–6 years
 C. The primary utility of TDSC is easy for community health workers to administer, without requiring specialized training in developmental pediatrics. They can identify potential delays in cognitive and motor function.
 D. The test giver compares the actual age of the child against a chart that plots the typical ages for achieving specific milestones.
 • A 'pass' is recorded if the child has already, achieved milestones to the left of their age line.
 • A 'delay' is assumed if a child cannot perform a task that falls to the left of their age line.
 E. *Other tests for developmental screening:*
 • DASII (Developmental Assessment Scale for Indian Infants)
 • Denver Developmental Screening test
 • Parent's evaluation of development status (PEDS)
 • Age and stage questionnaire
- A-4.** A. Good enough draw a Man Test
 B. Beyond 3 years of age
 C.
 • Formula for calculation of mental age = $3 + (\text{number of parts}/4)$
 • Mental age of this child = $3 + (6/4)$ 4.5 years
- A-5.** A. Scissoring of legs
 B. Significant points in the history are prematurity, low birth weight and prolonged NICU admission
 C. Spastic diplegia (spastic bilateral cerebral palsy)
 D. Periventricular leukomalacia with dilated ventricles is commonly seen in MRI of brain in these babies.
 E. Intellectual ability may be normal or minimal affected in spastic diplegic cerebral palsy
- A-6.** A. Anorexia nervosa
 B. Binge eating and restricting types

C. Obsessive compulsive disorder (OCD), hyperthyroidism, malignancy, inflammatory bowel disease (IBD), etc. are differential diagnosis.

D. *Complications of anorexia nervosa:*

- Cardiac complications like hypotension, bradycardia, refeeding syndrome, tachyarrhythmias
- Hypothalamic dysfunction
- Decreased bone and mineral density
- Endocrinal problems

E. *Indications for hospitalization:*

- Heart rate <50/min
- Arrhythmias
- Hypotension and postural hypotension
- Hypokalemia
- Hypoglycemia
- Dehydration
- Suicidal intent

A-7. A. *Diagnostic tools for ADHD:*

- Child behavior checklist
- Conners abbreviated rating scale
- Vanderbilt ADHD diagnostic rating scale

INCLIN diagnostic tool for ADHD is validated for Indian Children

B. *Differential diagnosis of ADHD:*

- Thyroid disorders
- Neurodegenerative diseases
- Hearing and vision impairment
- Fragile X syndrome
- Heavy metal poisoning

C. Multidisciplinary treatment including behavioral, interventions, educational interventions, psychostimulant drugs like methylphenidate, amphetamine, parents counseling.

D. History of cardiomyopathy, arrhythmia, syncope, etc.

A-8. All are true.

A-9. A. Autism spectrum disorder (ASD)

B. Diseases associated with ASD (in 10% cases)

- Fragile X syndrome
- Tuberous sclerosis
- Angelman syndrome
- Phenylketonuria
- Hypothyroidism

C. Triad of impaired communication, defect in social interactions and stereotypic and restrictive behavioral patterns is required to label ASD.

D. *Pharmacotherapy in ASD:*

Medication	Indication
Antipsychotics (risperidone, olanzapine)	Anxiety, aggression, repetitive behavior
Methylphenidate	Inattention, hyperactivity, impulsivity
Clonidine, atomoxetine	Hyperactivity
Melatonin	Sleep-related problems
Iron supplementation	Iron deficiency

- A-10.** A. Breath-holding spell
B. Cyanotic spell, Pallid spell or mixed
C. *Differential diagnosis:*
- Seizures
 - Dystonia
 - Cardiac arrhythmia
- D. Counseling to parents regarding self-resolving condition and to ignore it. They should not be panic. Iron supplementation may reduce the episodes.
- A-11.** A. *Differential diagnosis of ASD:*
- Language disorders
 - Intellectual disability
 - Developmental delay
 - Hearing impairment
- B. *Physical examination points in ASD:*
- Head circumference (may be macrocephaly)
 - Dysmorphic features
 - Muscle tone and DTR
- C. Macrocephaly or microcephaly, developmental regression or focal findings on CNS examination are indications for radioimaging of brain
- D. *Treatment of ASD:*
- Applied behavioral analysis methods such as joint attention, shared enjoyment and reciprocal communication and educational approaches
 - Speech and language therapy
 - Augmentative communication
 - Parent-mediated early intervention
 - Social skills program
- A-12.** A. Autism
B. 20% of children with autism have macrocephaly
C. Risperidone and Aripiprazole are FDA approved drugs for autism
- A-13.** A. Tourette syndrome
B. Obsessive compulsive disorder (OCD), learning disabilities, autism spectrum disorders, anxiety, depression and ADHD are associated disorders.
- C. *Differential diagnosis of Tourette syndrome:*
- Stereotypies
 - Movement disorders
 - Torticollis
 - Sandifer syndrome
 - Shuddering attacks
- D. *Treatment modalities:*
- Psychoeducation
 - Habit reversal therapy (HRT)
 - Drugs like haloperidol, clonidine, aripiprazole, etc.
- A-14.** A. Conversion disorder (functional neurological disorder)
B. *Risk factors for conversion disorder:*
- Genetic factor
 - Childhood trauma
 - External environmental stress in school or family

- Sensitive or insecure temperament
- Psychiatric comorbid conditions
- Preexisting other illnesses

C. *Management:*

- Multidisciplinary
- Modification of parental responses
- Treatment of psychiatric and other associated illnesses

A-15. A. Specific-learning disorder

- B. ADHD, autism, communication disorders and developmental coordination disorders may be associated comorbid conditions

C.

- Changes in teaching assessment
- Modifications like lowering level of teaching
- Remediation methods for critical and numeracy skills

A-16. A. Specific learning disability is defined as persistent impairment in reading (dyslexia), writing (dysgraphia) and/or arithmetic (dyscalculia) skills in an individual with preserved cognition, vision, hearing and adequate opportunities

- B. Dyslexia is the most common specific learning disability (almost 80%)

- C. Possible etiology is functionally disrupted networks in the cerebral cortex with intact anatomy

D. *Features suggesting specific learning disability:*

- Reading slowly and incorrectly
- Skipping lines while reading aloud
- Making repeated spelling mistakes
- Untidy or illegible handwriting
- Poor sequencing and inability to perform even simple mathematics

A-17. A. *Juvenile delinquency:* Children who show oppositional defiant behavior or conduct disorders and come into conflict with the juvenile system are called juvenile delinquents.

The term refers to a person under 18 years of age who is brought to the attention of juvenile justice system for committing a criminal act or displaying other illegal behaviors like the use of alcohol or illicit drugs.

- B. *Munchausen by proxy:* Munchausen syndrome by proxy is a disorder in which a caregiver, usually mother deliberately makes up a history of illness in her child and/or harms the child to create illness. In this condition, the abusing caregiver gains attention from the relationship formed with healthcare providers, her family and as a result of problem created.

- C. *Pica:* Pica is the persistent ingestion of non-nutritive substances such as plaster, charcoal, paint and soil for at least one month, inappropriate to the child's developmental level and cultural practice. It is common in children less than 5 years of age.

- D. *Temper tantrums:* It is a child's response to physical or emotional challenges by attention seeking tactics like crying, kicking, pushing, throwing objects, hitting, head banging, etc. Tantrums typically begin at 18–36 months of age and gradually subsides by the age of 3–6 years.

- E. *Thumb-sucking:* It is normal in infants and toddlers. It peaks by 18–21 months of age and usually disappears by the age of 4 years. If it persists, can lead to malalignment of teeth.

- F. *Stuttering:* It is a defect in speech characterized by hesitation or spasmodic repetition of syllabuses with pauses. There is difficulty in pronouncing the initial consonants caused by spasm of lingual and palatal muscles. It can affect up to 5% of children between 2 and 5 years of age.

- G. *Enuresis:* It is defined as passage of urine in the clothes beyond an age when bladder control should be established, usually 5 years. Both psychological stress and physiological dysfunction can be seen in affected children. Enuresis may be primary or secondary (after an initial control for 6 months or more). Primary

monosymptomatic nocturnal enuresis is the commonest variety. Before labeling as primary enuresis, UTI, diabetes and bowel bladder dysfunction should be ruled out.

- H. *Encopresis*: It is defined as passage of stools in clothes beyond an age when bowel control should have been achieved, usually 4 years. It may be retentive (associated with constipation) or non-retentive, primary (never achieved bowel control) or secondary (loss of control after an initial phase of control for at least 6 months). Primary encopresis is usually associated with constipation, while secondary is associated with significant psychological stressors.

- A-18.** A. Newborn
C. 5 months
B. 4 months
- A-19.** A. 4 weeks
C. 12 weeks
B. 8–10 weeks
- A-20.** A. 8 weeks
C. 6 months
E. 11 months
B. 4 months
D. 8 months
- A-21.** A. At birth
C. 9–12 months
B. 5–6 months
- A-22.** A. 3 years
C. 4.5 years
E. 6 years
G. 8 years
I. 11 years
B. 4 years
D. 5 years
F. 7 years
H. 9 years
- A-23.** A. Hearing assessment. Make a sound of a bell kept at 1.5 feet away and out of the field of vision of the child.
B. 10 months

Essentials for PG Pediatric Exam

Salient Features

This book comprises four sections, almost everything for PG practical exam.

- **Sections 1: OSCEs**

- More than 600 objective structured clinical examinations (OSCEs), covering all topics.
- Presented as case scenarios, laboratory data, radioimaging pictures, drugs, and instruments.
- Important clues are provided to crack the OSCEs.

- **Section 2: Spotters**

- Common spotters for exam are selected and presented in a question–answer format.

- **Section 3: Viva**

- Topics chosen are frequently discussed in every PG exam. Each one is discussed in details with accurate and clear answers.

- **Section 4: Common Procedures**

- Common procedures are included from an exam point of view.

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