

QP Code:

Reg No

PG Degree Examinations in Pediatrics (MD) June 2026

Paper I – Basic Science As related to Pediatrics

Time: 3 hrs

Max marks : 100

1. Discuss the concept of "Critical Periods" in brain development. Explain the neurobiological mechanisms of synaptogenesis, pruning, and myelination, and how early childhood adversity (toxic stress) alters the hypothalamic-pituitary-adrenal (HPA) axis and brain architecture. **20 marks**

Short Essays:

8x10 marks

2. Multiplex molecular diagnosis in children
3. Mechanisms of antimicrobial resistance giving examples and methods to overcome these.
4. Discuss the pathogenesis of adverse drug reactions and management of anaphylaxis. Add a note on Pharmacovigilance program of India.
5. Urinalysis in childhood renal diseases. Draw and label different types of urinary casts and crystals found in kidney diseases.
6. Explain the lung volumes and capacities. Graphically describe the flow volume loops in normalcy and in disease conditions
7. Enumerate the conditions predisposing to Pediatric malignancies
8. Discuss the physiology of puberty. Write down the diagnostic algorithm for evaluation of delayed puberty in girls
9. Pathophysiology of hepatic encephalopathy