

Syllabus for the post of

Professor, Paediatric Surgery, Class-I (Advt. No. 20/2023-24)

Marks – 200

Questions – 200

Medium - English

1. Basic Sciences:

- Ethics
- Molecular biology (relevant to Pediatric Surgery)
- Genetics (relevant to Pediatric Surgery)
- Embryology Growth & Development
- Fetal medicine (diagnosis and management of Surgically correctable lesions)
- Physiology as applicable to surgery (including neonatal physiology, Monitoring, acid-base etc.)
- Respiratory physiology (including ventilatory support)
- Metabolism and nutrition (including principles and practice of parenteral nutrition)
- Haematology (including coagulation defects and transfusion medicine)

2. Neonatal Surgery

Special Anatomy and Physiology as applicable to fetus and newborn

- Surgical technique
- Pre and post operative management
- Ventilatory/respiratory care
- Monitoring
- Investigative Procedures

3. General Paediatric Surgery

- Wound healing - -
- Infections and sepsis - -
- Organ transplantation - -
- Anesthesia (including pain relief), - -
- Trauma (including burns) - -

- Head and neck (excluding ophthalmic and otorhinolaryngologic disorders) - -
- Abdomen - Umbilicus, Abdominal wall, Hernia, Testis, Adrenals
- Vascular Malformations - Hemangioma, Lymphangiomas, Peripheral arterio-venous disorders
- Soft Tissue Lesions - -
- Twinnig - -
- Oncology - -

4. Imaging Techniques

Including ultrasound, conventional and specialized Radiology and nuclear scans MRI (Knowledge of radiation biology).

- Gastroesophageal reflux
- Meconium ileus
- Disorders of rotation and fixation
- Intestinal obstruction due to various causes
- Short bowel syndrome
- GI bleeding
- Ascites
- Necrotising enterocolities
- Inflammatory bowel disease
- Peritonitis, other infections
- Stomas
- Constipation
- Obstructive and hemolytic jaundice

5. Genitourinary Tract

- Anatomy and physiology - -
- Congenital anomalies, - Kidney, Ureter, Bladder, Urethra, Renal, Bladder.
- Adrenal - Obstructive uropathy, Vesicoureteral reflux, Megaureter, Urinary tract infections, Urinary lithiasis,

Renal vein thrombosis, renovascular hypertension,
 Urinary diversion and undiversion,
 Functional disorders of bladder,
 Hypospadias and epispadias,
 Other disorders of urethra, penis and scrotum,
 Ambiguous genitalia,
 Female genital tract,
 Endoscopy, laparoscopy,
 Urodynamic studies

6. Gastrointestinal, Pancreatic, Hepatobiliary

- Anatomy and physiology - -
- Congenital anomalies - Esophagus,
Stomach,
Small bowel,
Large bowel,
Anorectum,
Liver and biliary tree,
Pancreas, Spleen.
- Esophagus - Esophageal burns, strictures, replacement,
Esophageal manometry and pH studies,
Gastroesophageal reflux,
Meconium ileus,
Disorders of rotation and fixation,
Intestinal obstruction due to various causes,
GI Bleeding,
Ascites,
Necrotising enterocolitis,
Short Bowel syndrome,
Inflammatory bowel disease,
Peritonitis and other infections.
- Tumors - Gastrointestinal, Hepatobiliary, Pancreatic.
- Portal Hypertension - -
- Anorectal manometry - -
- Endoscopy and Laparoscopy -

7. Thoracic

- Anatomy and Physiology - -
- Chest wall deformities - -

- Congenital Malformation - Tumors,
Chest wall,
Mediastinal,
Lungs and pleura,
Infection of lung and pleura,
Foreign bodies,
Airway.
- Congenital Malformations - Breast,
Chest wall,
Diaphragm,
Mediastinum,
Aerodigestive tract,
Lungs,
Disorders of breast.

8. Surgical staplers & Endoscopy

9. Plastic Surgery

- Principles, anatomy (relevant)
- Burn management and sequele
- Cleft lip and Palate,
- Choanal Atresia
- Syndactyly
- Skin graft, flap rotation, z-plasty

10. Neurosurgery

- Anatomy and physiology of brain, CSF pathways and spine
- Hydrocephalus
- Cranio-spinal dysraphism and sequele
- Craniofacial deformities

11. Oncologic Surgery

Physiologic effects mode of actions, synergism of chemotherapy

- Biopsies
- Curative/palliative resections
- Use of CUSA and Argon laser
- Administration of chemotherapeutic agents, monitoring and management of their complications.

12. TRAUMA

- Infants and Children as Accident victims and their Emergency management
- Thoracic injuries
- Abdominal trauma
- Genitourinary tract trauma
- Early evaluation and management of hand, soft tissue and Envenomation injuries
- Musculoskeletal trauma
- Central Nervous System Injuries
- Vascular injuries
- Treatment of Burns
- Special Consideration in Trauma: Child Abuse and Birth injuries

13. SPECIAL AREAS OF PAEDIATRIC SURGERY

- Congenital Heart Disease and Anomalies of the Great Vessels
- Management of Spina Bifida, Hydrocephalus, Central Nervous System Infections, and Intractable Epilepsy
- Major Congenital Orthopedic Deformities
- Bone and Joint Infections
- Amputation Considerations in Childhood

14. RESEARCH METHODOLOGY.

15. MEDICO LEGAL ASPECTS RELEVANT TO THE DISCIPLINE.

16. INDIAN MEDICAL COUNCIL (PROFESSIONAL CONDUCT, ETIQUETTE AND ETHICS) REGULATIONS, 2002.

17. CURRENT TRENDS AND RECENT ADVANCEMENTS IN THE FIELD OF PEDIATRIC SURGERY.