

**Write short Notes on:**

1. Discuss briefly the pathogenesis of necrotising enterocolitis (NEC) in the new born.
2. Discuss the metabolic complications encountered in an infant with repeated vomiting due to infantile hypertrophic pyloric stenosis.
3. Briefly discuss thermoregulation in newborns.
4. Discuss the role of DTPA nuclear renal scan in the diagnosis of congenital hydronephrosis.
5. What is extra-corporeal membrane oxygenation (ECMO). Briefly describe its current role in management of congenital diaphragmatic hernia.
6. Enumerate the common complications of transfusion of blood or blood products.
7. What is Beckwith-Wiedmann syndrome? What are the common clinical manifestations and conditions associated with this syndrome?
8. Discuss briefly the embryology of development of the diaphragm.
9. What is tumor lysis syndrome? Discuss briefly the pathogenesis of this condition.
10. Discuss the role of SRY, SOX9 and DAX-1 genes in sex differentiation.

**Write short Notes on:**

1. Discuss the management of a 5 year old boy with 20% superficial burns of the extremities.
2. Discuss the fate of structures related to the developing umbilicus. Write a short note on omphalomesenteric remnants.
3. Classify splenic injuries and discuss the management of splenic injuries in childhood.
4. Discuss the presentation and management of mesonephric blastoma.
5. What is the CHARGE syndrome? Discuss briefly the common congenital anomalies comprising this association of defects.
6. Discuss the presentation and management of first branchial arch anomalies.
7. What is a cystic hygroma? Describe briefly the presentation and management of cystic hygroma.
8. What is abdominal compartment syndrome? Discuss briefly the presentation and management of this condition.
9. What is Cronzon's syndrome? Discuss in brief, the management of Cronzon's syndrome.
10. What are oncogenes? Discuss the role of oncogenes in the occurrence of Wilms tumor.

**Write short Notes on:**

1. Discuss role of laparoscopy in the diagnosis and management of undescended testis.
2. Classification and management of choledochal cysts.
3. Discuss management of total colonic aganglionosis.
4. Current role of the liver transplantation in management of extrahepatic biliary atresia.
5. Presentation and management of Horse-Shoe kidney.
6. Esophageal lengthening techniques in the management of long-gap esophageal atresia.
7. Presentation and management of congenital lobar emphysema.
8. Discuss briefly the evaluation and management of persistent cloacae.
9. Management of gastroschisis.
10. Discuss the objectives and recommendations of NWTS – 5 protocol for Wilms tumor.

**Write short notes on:**

1. Embryology of anorectal malformations
2. Pathways of steroid hormone biosynthesis from cholesterol
3. Pathogenesis of systemic inflammatory response syndrome
4. Coagulation cascade
5. Different modes of ventilation
6. Pathophysiology of hirschsprung's disease
7. Bio chemical changes following augmentation cystoplasty using colon
8. Stages of lung development
9. Anti-reflux mechanisms at lower gastro esophageal junction
10. DISIDA Scan and its role in the evaluation of neonatal cholestasis

**Write short notes on:**

1. What are the mechanisms of heat loss in the newborn surgical patient? Describe the measures that can be employed to minimize heat loss and maintain thermoregulation in these patients.
2. Discuss the metabolic complications of recurrent vomiting in a child with infantile hypertrophy pyloric stenosis (IHPS)
3. What is extracorporeal membrane oxygenation (ECMO). Discuss briefly its current role in the management of patients with congenital diaphragmatic hernia
4. Discuss the role of laparoscopy in the management of un-descended testis
5. Enumerate the common congenital surgical malformations associated with Down's syndrome
6. What is stage IV-S Neuroblastoma. Discuss the management of this condition
7. Discuss the staging and principles of management of malignant melanoma
8. What is primary lymphedema. Discuss briefly the presentation and management of primary lymphedema of the extremities.
9. Discuss the presentation and management of a large cervical cystic hygroma in a newborn
10. Discuss the current status of fetal surgery in the management of common congenital malformations of the urinary system

**Write short notes on:**

1. Management of obstructive jaundice in a 2 month old baby
2. Exomphalos major – antenatal & postnatal management
3. Ectopic Ureter
4. Valve bladder syndrome
5. Use of stomach for bladder augmentation
6. -Testicular feminization syndrome
7. Wilm's tumor with unfavorable histology
8. Fowler Stephens' operation for un-descended testis
9. Pure esophageal atresia (without tracheoesophageal fistula) and its management
10. Segmental anatomy of the liver

Write short notes on:

1. Neonatal thermoregulation.
2. Mechanical ventilation and different modes of ventilation.
3. Oxyhemoglobin dissociation curve.
4. Estimation of allowable blood loss during surgery.
5. Compartment syndrome in musculoskeletal trauma.
6. Enumerate five common alkylating agents used for chemotherapy in pediatric solid tumors and describe their mechanism of action.
7. Pathophysiology of gastro-esophageal reflux.
8. Embryology of ectopic ureter.
9. Pathogenesis of necrotizing enterocolitis.
10. Fluid and electrolyte resuscitation in pediatric burns patients.

Write short notes on:

1. Enumerate indications for splenectomy in children. Briefly describe Post Splenectomy Sepsis.
2. Draw a logarithm to rule out various differential diagnosis of hypoglycemia and briefly discuss the management.
3. Role of laparoscopy in management of cryptorchidism.
4. Non-operative treatment of intussusception.
5. Discuss pros & cons of various diagnostic investigations of Hirschsprung's disease. Enumerate differential diagnosis of Hirschsprung's disease.
6. Evaluation of continence for patients operated for anorectal malformations.
7. Enumerate diagnostic investigations for a patient suspected of biliary atresia. Discuss post-operative management after Kasai's operation.
8. Management of long-gap esophageal atresia.
9. Pulmonary sequestration.
10. Prognostic factors to predict outcome of infants with congenital diaphragmatic hernia.

Write short notes on:

1. Arrested Hydrocephalus.
2. Poland's Syndrome.
3. Describe staged repair of classic exstrophy using radical mobilization of soft tissues.
4. Indications and alternatives for bladder augmentation. Discuss consequences and complications of inserting gastrointestinal segments into the urinary tract.
5. Various dysfunctional voiding disorders and briefly discuss their management.
6. Causes of urinary lithiasis and discuss metabolic workup for children harboring recurrent urinary stones.
7. Therapeutic approaches to pyelo ureteral junction anomalies and discuss pros & cons of each.
8. Various approaches to bile drainage after excision of choledochal cyst and briefly discuss their pros & cons.
9. Different stages of empyema thoracis and their management.
10. Staging hepatoblastoma and briefly discuss the management of hepatoblastoma.