1. Discuss the metabolic complications encountered in an infant having infantile hypertrophic pyloric stenosis. Describe briefly the underlying pathophysiology in paradoxical aciduria.

2. Briefly discuss the principles of pulse oximetry. Enumerate its advantages and disadvantages.

3. Enumerate different fetal imaging techniques. Briefly mention their diagnostic and therapeutic uses.

4. Discuss the features by which the neonates differ from adults with regards to thermoregulation. Enumerate the various mechanisms by which surgical neonates may loose body heat.

5. Define a teratoma. Enlist the common sites of teratoma. Discuss briefly the presentation and principles of management of sacrococcygeal teratoma.

6. What are the components of APGAR score? Enumerate the resuscitation measures used in neonates.

7. What are the different components of blood used in therapy? Describe briefly the indications for transfusion of these blood components and the common complications that can follow transfusion of blood products.

8. Describe fetal circulation. What are the causes of persistent fetal circulation?

9. What is the principle of Patient Controlled Analgesia (PCA)? Outline its role in children.

10. Describe the surgical anatomy of the liver. Enumerate the common liver resections performed in clinical practice.
1. Describe briefly the endoscopic grading of caustic injury to the esophagus. Outline the principles of management of esophageal injury due to caustic ingestion. Enumerate the different routes for positioning the esophageal substitute.

2. Classify vascular malformations. Outline the non-surgical modalities used for management of hemangioma.

3. List the radiological imaging findings associated with necrotizing enterocolitis (NEC). State the NEC staging system. Define NEC totalis.

4. How do you calculate estimated percentage of total body surface area burnt in different age groups of children? What are American Burn Association Criteria for ‘major burn injury’?

5. Briefly mention the complications of undescended testes. Briefly discuss the surgical options available for high intra-abdominal undescended testis.

6. Describe briefly the presentation, diagnosis and management of H-type tracheoesophageal fistula.


8. What are the different types of germ cell tumors? Enumerate the tumor markers associated with germ cell tumors.


10. Enumerate the causes of bleeding per rectum in children. Classify gastrointestinal polyps and outline their management.