

**PEDIATRIC HEMATO ONCOLOGY**  
**THEORY PAPER**

**Time : 3 hours**  
**Max. Marks : 100**

**Attempt all questions in order.**  
**Each question carries 10 marks.**

**Write short notes on:**

1. Describe the management of a 2-years old girl with unilateral group D retinoblastoma with respect to: 2+2+3+3
  - a) Diagnosis
  - b) Role of intra-arterial, vs, intravenous chemotherapy,
  - c) Suggested chemotherapy protocol,
  - d) Local therapy
2. a) Antibiotic stewardship program. 4+4+2  
b) What is Cairo Bishop Grading classification of tumor lysis syndrome? What are its main shortcomings?
3. During administration of intrathecal methotrexate to a 5-year-old child with ALL, mention precautions and procedure with respect to: 5+5
  - a) platelet count, general/local anaesthesia and type of needle.
  - b) dilution and dose of the drug, posture after the procedure and instructions to care-takers.
4. a) Briefly describe the peripheral smear and bone marrow findings in a child with acute immune thrombocytopenic purpura (ITP). 4+6  
b) Treatment options and algorithm for management of a child with chronic ITP.
5. a) Discuss prenatal origin of infant leukemia and management principles of treating an infant with leukemia. 5+5  
b) What is null hypothesis and Odds ratio? What is the purpose of conducting a phase 3 clinical trial?
6. a) What advice would you give for vaccination to a 5-year-old child who has just completed treatment for acute lymphoblastic leukemia? 5+5  
b) What is metabolic syndrome and explain its relationship with leukemia survivors?
7. a) Describe principles and indications of autologous bone marrow transplant in Pediatric solid tumors 5+5  
b) Irradiation of blood products (indications, principle and dose of radiation)

8. a) What is pharmacogenomics? Briefly describe any two examples explain the same in cancer treatment of children. 3+8+2+2  
b) When do you use leucovorin with methotrexate dosing and what is its rationale?
9. a) Immature Reticulocyte fraction 5+5  
b) Reticulated Hemoglobin
10. a) How will you plan survivorship care for a 17-year-old male who completed therapy for Non-Seminomatous germ cell tumor of Pineal gland, who is off therapy for 3 years (therapy included four cycles of BEP chemotherapy and craniospinal radiation)? 5+5  
b) Plan palliative care of a 4-year-old boy with recurrent metastatic neuroblastoma (multiple bony lesions).

\*\*\*\*\*