

**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. a) Hematological problems in Trisomy 21. 5+5  
b) Hematological manifestations of SLE.
2. a) Principles of flow cytometry. 5+5  
b) Early precursor T cell ALL.
3. a) Staging and risk stratification of Rhabdomyosarcoma. (2+3)+5  
b) Management of testicular Rhabdomyosarcoma in a 12-year-old boy.
4. a) Evaluation and management of pulmonary Aspergillosis in leukemic child. 4+3+3  
b) Chronic granulomatous disease.  
c) IV Immunoglobulin therapy.
5. In a patient with hereditary spherocytosis, describe: 2+3+5  
a) Peripheral smear picture.  
b) Eosin-5'-maleimide binding test, and current role of osmotic fragility test monitoring.  
c) Indications of splenectomy, and the role of partial vs. total splenectomy.
6. a) Image defined risk stratification in Neuroblastoma 3+3+4  
b) Role of immunotherapy in Neuroblastoma  
c) Opsomyoclonus
7. a) How will you risk stratify a newly diagnosed case of childhood acute promyelocytic leukemia? 3+(3+2+2)  
b) Describe induction therapy of this disease, side effects associated with induction treatment and how will you manage them?
8. a) Hepcidin. 5+5  
b) Genetic counselling for beta thalassemia.
9. a) What are the components of normal Hemostasis? Discuss mechanism of primary hemostasis (with the help of a diagram). (3+3)+4  
b) Discuss pathophysiology of Glanzmann thrombasthenia.
10. a) Car-T cell therapy  
b) Mechanism of action of Blinatumomab in relapsed B-ALL (with the help of a diagram). 4+3+3  
c) Mechanism of action of Ruxolitinib in GVHD (with the help of a diagram).

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