

**Q P Code: 101516**

**Reg. No.:.....**

**D.M. (Pediatric Oncology) Degree Regular/Supplementary  
Examinations November 2023**

**Paper I – Basic and Applied Sciences as related to Pediatric Oncology**

**Time: 3 hrs**

**Max marks: 100**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

**Essay: (20)**

1. What is the incidence of cancer among children and adolescents worldwide and in India. How is the incidence affected by sex, race, and ethnicity

**Short essays: (8x10=80)**

2. Tabulate the differences between case-control study, cross-sectional study, and cohort study.
3. Tabulate the histological differences between classical Hodgkin lymphoma, nodular lymphocyte-predominant Hodgkin lymphoma, and anaplastic large cell lymphoma.
4. A 2-year-old boy has bilateral retinoblastoma with no apparent family history. How will you counsel for the risk of retinoblastoma for the subsequent pregnancy? Role of antenatal diagnosis.
5. List at least 7 cancers that merit a genetic evaluation independent of family history. Also include the common genetic loci that is/are typically tested.
6. In relation to the biology of childhood cancers, write a short essay on cell proliferation.
7. Role of FISH, vs. PCR, vs. NGS for risk stratification of pediatric acute lymphoblastic leukemia.
8. Immune surveillance
9. Describe the pharmacological profile of methotrexate.

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