

**DETAILED SYLLABUS FOR THE POST OF ASSISTANT PROFESSOR IN  
MEDICAL ONCOLOGY IN MEDICAL EDUCATION - DIRECT RECRUITMENT**

**(Cat.Nos: 010/2025)**

1. Essentials of Molecular Biology - Basic Principles, Genomics, Proteomics and Cancer, Cancer genome. Telomeres and Telomerase, Programmed cell death, Signal transduction, Immunology, Cytogenetics, Cell Cycle, Cancer stem cells, invasion and metastases, antigenesis. **(10 Marks)**
2. Principles of Oncology: Etiology of cancer, Tobacco Carcinogenesis, Cancer Susceptibility syndromes, Etiology of cancer- Viruses, Inflammation, Chemical factors, Physical factors. Dietary factors, Obesity and physical factors. **(10 Marks)**
3. Basic Epidemiology - epidemiologic methods, descriptive and analytical epidemiology. Epidemiology of Cancer: Global cancer incidence, Changes in cancer mortality. **(10 Marks)**
4. Principles of Cancer management: Surgical oncology, Medical Oncology, Radiation Oncology and Biologic Therapy. **(10 Marks)**
5. Pharmacology of Cancer chemotherapy and Biotherapeutics - Interferon, interleukins, hormonal therapy. Differentiating agents, monoclonal antibodies, antiangiogenic factors, antisense agents, preventive vaccines etc. **(10 Marks)**
6. Cancer Prevention - tobacco related cancers, diet, chemoprevention etc **(10 Marks)**
7. Hemat oncology and bone marrow transplant **(10 Marks)**
8. Systemic oncology **(20 Marks)**
  - A) Head and neck oncology
  - B) Breast, thoracic and Gastrointestinal oncology
  - C) genitourinary oncology, skin and soft tissue sarcoma
9. Pediatric oncology **(5 Marks)**

10. Oncological emergency, Pain and palliative care

**(5 Marks)**

***NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper.***