



होमी भाभा राष्ट्रीय संस्थान  
Homi Bhabha National Institute

**(Tata Memorial Centre)**

**Dr. Ernest Borges Marg, Parel Mumbai - 400 012**

**Theory Examination - DM Medical Oncology**

**May - June 2014**

**Paper I**

Basic Sciences, Cancer Biology, Tumour Immunology, Cancer Aetiology, Pharmacology,  
Radiation Biology, Tumour Pathology

Answer any 10

1. Cell cycle check points
2. Next generation sequencing
3. Epigenetics in cancer
4. Targeting metabolism in cancer
5. Immune surveillance in cancer
6. Rationale of concurrent RT+CT in HNSCC
7. Tamoxifen resistance: diagnosis and treatment
8. Pathogenesis of epithelial cervical cancer
9. Risk factors for breast and ovarian cancers
10. Cytogenetics in acute myeloid leukemia
11. Knudson's two-hit theory
12. Apoptosis



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**Paper II**

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Principles of Medical Oncology, Management

Answer any 10

1. Principles and practice of high-dose methotrexate
2. Discuss cancer cachexia
3. Discuss management of a 45-yr old woman with tense ascites
4. Discuss management of Wilm's tumour
5. Adjuvant and neo-adjuvant therapy for pancreatic cancer
6. Role of chemotherapy for urinary bladder cancer
7. Approach to a case of metastatic gastroentero-pancreatic (GEP) neuroendocrine tumour
8. Immunotherapy for advanced malignant melanoma
9. Propose a design of a clinical trial for treatment of neutropenia following adjuvant chemotherapy for early breast cancer
10. Differential diagnosis of a retroperitoneal mass in a 28-yr old man
11. Targeted therapy in advanced HNSCC
12. Metronomic therapy in solid tumours



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**Paper III**

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**Haematological Malignancies**

**Answer any 10**

1. Monoclonal antibodies in chronic lymphocytic leukaemia
2. Discuss diagnosis and management of peripheral T cell lymphoma
3. Infections as aetiology in lymphomas
4. Importance of marrow microenvironment in multiple myeloma
5. Discuss management of acute promyelocytic leukaemia
6. Monitoring response in chronic phase-chronic myeloid leukaemia
7. Classify antifungal agents and their role in febrile neutropenia
8. Role of allogeneic stem cell transplantation in haematological malignancies
9. Evolution of treatment of acute lymphoblastic leukaemia
10. Myelofibrosis: diagnosis and management
11. Diagnosis and management of CMV infection in haematological malignancies
12. Treatment of primary CNS lymphoma in a 65-yr old man



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**Paper IV**

**Cancer Epidemiology, Prevention, Psycho-oncology, Rehabilitation, Societal Oncology**

**Answer any 10**

1. Epidemiology of breast and cervical cancer in India
2. Landmark analysis
3. Concept of hospice and its practice in India
4. Psychological issues in hereditary cancers
5. Functions/working of a Regional cancer centre in India
6. Follow-up of a child with ALL who completed treatment successfully
7. Survival analysis
8. Obesity and cancer
9. Lung cancer screening
10. Occupational cancers
11. Second malignancies
12. Role of a medical oncologist beyond patient care