Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 15-Mar-2025

Time: Three Hours **Max. Marks: 100 Marks**

Medical Oncology - PAPER – I
Basic Sciences including Cancer Biology, Tumour Immunology, Etiology, Pharmacology, Radiation Biology and Tumour Pathology
QP Code: 9121

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions **10 x 10 = 100 Marks**

1. Discuss tobacco and diet related cancer and their prevention strategies.
2. Cell Cycle checkpoints.
3. Serious Adverse Events in Clinical trials.
4. Epithelial to Mesenchymal Transition.
5. Tumor Infiltrating Lymphocytes.
6. Premalignant lesion of Head and Neck Cancers.
7. Stereotactic Body Radiotherapy.
8. Name various Vinca Alkaloids and their toxicity.
9. Palbociclib.
10. Tumor Supressor Genes.

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 17-Mar-2025

Time: Three Hours **Max. Marks: 100 Marks**

Medical Oncology - PAPER – II
Principles of Medical Oncology and Management of Solid Tumours
QP Code: 9122

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions **10 x 10 = 100 Marks**

1. Discuss the management of locally advanced nasopharyngeal carcinoma.

2. Discuss the management of Her-2 positive metastic breast cancer.

3. Discuss the evaluation of metastic non-squamous cell carcinoma lung and the role of EGFR inhibitors.

4. Discuss the management of metastatic malignant melanoma. Discuss the role of immunotherapy.

5. Discuss the management of locally advanced cervical cancer. Add a note on the use of HPV vaccination to prevent cervical cancer.

6. Discuss the management of locally advanced adenocarcinoma stomach. Discuss the role of chemotherapy in this setting.

7. Discuss the management of metastatic clear cell renal cell carcinoma. Discuss the role of immunotherapy.

8. Discuss the management, monitoring and follow-up of High-risk gestational trophoblastic neoplasm.

9. Li-fraumeni syndrome – discuss the diagnosis and follow-up.

10. Discuss the evaluation of patients planned for platinum-based chemotherapy.

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 19-Mar-2025

Time: Three Hours **Max. Marks: 100 Marks**

MEDICAL ONCOLOGY - PAPER – III
Haemato Oncology
QP Code: 9123

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

Answer All The Questions **10 x 10 = 100 Marks**

1. Blastic Plasmacytoid Dendritic Cell Neoplasm (BPDCN)
2. Molecular classification of Acute Myeloblastic Leukemia (AML) with rationale for using targeted therapies
3. Investigations for a new case of acute lymphoblastic leukemia in a 10 year old child with rationale for each
4. Treatment results for Hodgkin's Lymphoma from your centre. Critical appraisal of reasons for treatment failure
5. Compare and contrast Blinatumumab versus CAR-T cell therapy for management of relapsed acute Lymphoblastic leukemia
6. Principle and methodology of Quantitative RT-PCR for monitoring of chronic myeloid leukemia
7. Conditioning regimen for autologous stem cell transplantation for diffuse large B cell NHL in CR2
8. Compare pharmacology of cyclosporine, tacrolimus and Mycophenolate
9. TBI and non TBI conditioning regimen in pediatric ALL
10. Primary Systemic Amyloidosis – Management

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 21-Mar-2025

Time: Three Hours **Max. Marks: 100 Marks**

MEDICAL ONCOLOGY - PAPER – IV

General Oncology and Cancer Epidemiology, Prevention, Psycho-Oncology, Rehabilitation and Societal Oncology

QP Code: 9124

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

ANSWER ALL THE QUESTIONS **10 x 10 = 100 Marks**

1. Neoadjuvant chemotherapy in cervical cancer. Add a note on immunotherapy with concurrent radiotherapy in CA CERVIX
2. Grading of renal toxicity following autologous stem cell transplant. Define potential causes and outline the management
3. Indications and mechanism of metronomic therapy for head and neck cancer
4. Germline and somatic genetic mutation testing in metastatic castrate resistant prostate cancer
5. Role of Asciminib in CML CP. What is treatment free remission and who are the candidates for TFR?
6. Treatment strategies in advanced EGFR mutated lung cancer patients who have progressed on osimertinib
7. Liposomal Irinotecan in pancreatic cancer
8. Hyperthermic Intraperitoneal Chemotherapy (HIPEC)
9. Tobacco cessation strategies
10. Cognitive changes in cancer survivors

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 14-Aug-2025

Time: Three Hours **Max. Marks: 100 Marks**

Medical Oncology - PAPER – I
Basic Sciences including Cancer Biology, Tumour Immunology, Etiology, Pharmacology, Radiation Biology and Tumour Pathology
QP Code: 9121

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions **10 x 10 = 100 Marks**

1. Discuss the pathogenesis of Ewing's sarcoma.
2. Discuss the histological subtypes of breast cancer. Discuss the role and clinical value of testing for estrogen, progesterone receptor and Her-2 neu testing in a case of operable breast cancer.
3. Write a note on Ph-like acute lymphoblastic leukemia.
4. Discuss platinum based chemotherapeutic agents, their mechanism of action, uses and side effects.
5. Discuss the principle of autologous stem-cell transplant and its current clinical use.
6. Explain the function of retinoblastoma gene in health and disease. Explain the Knudson's two-hit hypothesis.
7. Discuss the principles and clinical utility of fluorescent in-situ hybridization testing in oncology.
8. Discuss the mechanism, clinical presentation and management of radiation-induced pneumonitis.
9. Discuss the mechanism of action, clinical use and side-effects of Rituximab.
10. Discuss the diagnostic approach to a case of chronic lymphoproliferative disorder.

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Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 16-Aug-2025

Time: Three Hours **Max. Marks: 100 Marks**

MEDICAL ONCOLOGY - PAPER – II

Principles of Medical Oncology and Management of Solid Tumours

QP Code: 9122

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

Answer All The Questions **10 x 10 = 100 Marks**

1. Discuss merits and demerits of methods for mutation testing in a newly diagnosed metastatic adenocarcinoma of lung
2. Briefly discuss various imaging tools for evaluation of space occupying lesion in brain in a 60 year old male
3. PARP inhibitors in the treatment of epithelial ovarian cancer
4. Population incidence, risk factors and geographical variation of stomach cancer in India
5. Fibromatosis
6. Briefly discuss treatment of metastatic castration-resistant prostate cancer including Radioligand therapy with ^{77}Lu-PSMA-617
7. Treatment of Rhabdomyosarcoma with favorable histology in children with 2 year survival rates
8. Tumor lysis syndrome in solid tumors
9. Molecular pathogenesis of head and neck cancer, risk factors and two year survival according to each sub-site
10. Monoclonal antibodies in the treatment of colon cancer

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 18-Aug-2025

Time: Three Hours **Max. Marks: 100 Marks**

Medical Oncology - PAPER – III

Haemato Oncology

QP Code: 9123

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions **10 x 10 = 100 Marks**

1. CNS directed therapy in NHL
2. Discuss management of relapsed multiple myeloma
3. Molecular monitoring of CML
4. Discuss histone deacetylase inhibitors
5. Discuss clinical features and management of double expresser lymphomas
6. CLL risk stratification
7. Donor lymphocyte infusion
8. Newer options in relapsed follicular lymphoma
9. Myelofibrosis
10. Waldenstrom Macroglobulinemia

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 20-Aug-2025

Time: Three Hours **Max. Marks: 100 Marks**

Medical Oncology - PAPER – IV
General Oncology and Cancer Epidemiology, Prevention, Psycho-Oncology, Rehabilitation and Societal Oncology
QP Code: 9124

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

ANSWER ALL THE QUESTIONS **10 x 10 = 100 Marks**

1. Write briefly on the molecular biology of Head and Neck cancers and role of Targeted treatment.
2. EGFR inhibitors in biliary tract cancers
3. Cancer Vaccines
4. Ct DNA monitoring in solid cancers – current evidence and clinical application
5. Discuss role of Trastuzumab Deruxtecan in Her-2 positive solid cancers
6. Recent Advances in the Management of Refractory Multiple myeloma
7. Role of thrombolytic agents in cancer patients
8. Parenteral nutritional support
9. NIVOLUMAB
10. Immunoconjugates

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 24-Nov-2025

Time: Three Hours **Max. Marks: 100 Marks**

MEDICAL ONCOLOGY - PAPER – I

(Basic Sciences including Cancer Biology, Tumour Immunology, Etiology, Pharmacology, Radiation Biology and Tumour Pathology)

QP Code: 9121

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

Answer All The Questions **10 x 10 = 100 Marks**

1. Molecular biology of HER – 2 Neu Pathway, method of testing and name drugs acting on this pathway
2. Minimal Residual Disease (MRD) by flow cytometry and NGS and clinical impact of MRD monitoring as applicable to multiple myeloma
3. Principle of Proton beam therapy and its utility in treatment of brain tumours
4. WHO classification of bone sarcomas
5. Flow cytometry principle and utility in Leukemia management
6. Molecular basis of association of obesity with risk of cancer. List five cancers associated with obesity with epidemiological evidence for each of them
7. Peptide Receptor Radionuclide Therapy (PRRT)
8. Principle and utility of Intensity Modulated Radiotherapy (IMRT)
9. T cell phenotype, specificity and their role in immune check point blockade
10. Antibody drug conjugates

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Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 26-Nov-2025

Time: Three Hours **Max. Marks: 100 Marks**

MEDICAL ONCOLOGY - PAPER – II

Principles of Medical Oncology and Management of Solid Tumours

QP Code: 9122

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

Answer All The Questions **10 x 10 = 100 Marks**

1. Immunotherapy for Esophageal cancer
2. Maintenance therapy for triple negative breast cancer
3. Treatment and outcome of choriocarcinoma in a 20 year old lady with WHO risk score – 6
4. Neo-adjuvant and adjuvant strategies in operable Non small cell Lung Cancer
5. Imaging features of Neuroblastoma versus Wilms tumour and Image dependent risk factors (IDRFs) for Neuroblastoma
6. Etiology and management of Hypercalcemia in solid tumours as seen in your wards
7. Chemotherapy, anti VEGF therapy and immunotherapy for metastatic cervical cancer with impact of each therapy on survival
8. Survival impact of Neoadjuvant chemotherapy for advanced stomach cancer
9. Management of Hepatoblastoma
10. Treatment approach for recurrent epithelial ovarian cancer with results from your Institute

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 28-Nov-2025

Time: Three Hours **Max. Marks: 100 Marks**

Medical Oncology - PAPER – III
Haemato Oncology
QP Code: 9123

Your answers should be specific to the questions asked.
Draw neat, labeled diagrams wherever necessary.

Answer All The Questions **10 x 10 = 100 Marks**

1. Discuss the risk stratification in acute Promyelocytic leukemia. Discuss the various treatment options of high-risk acute Promyelocytic leukemia.

2. Define early stage unfavorable Hodgkin's lymphoma. Discuss the various treatment options in this setting.

3. Define relapsed/refractory myeloma. Discuss the factors that are considered in planning treatment and principles of managing relapsed/refractory myeloma.

4. Discuss the biology of chronic myeloid Leukemia. Write a note on the available treatment options.

5. Discuss the treatment options available for p53 mutated chronic lymphocytic leukemia.

6. Discuss the assessment and management of elderly diffuse large B-cell lymphoma.

7. Discuss the evaluation and principles of treatment of relapsed follicular lymphoma.

8. Discuss the evaluation and approach to the management of patients with T-cell chronic lymphoproliferative disorder.

9. Discuss the mechanism and management of Dasatinib-induced pleural effusion.

10. Discuss the mechanism of action, indications and adverse effects of Daratumumab.

Rajiv Gandhi University of Health Sciences, Karnataka

D.M Degree Examination – 01-Dec-2025

Time: Three Hours **Max. Marks: 100 Marks**

Medical Oncology - PAPER – IV
General Oncology and Cancer Epidemiology, Prevention, Psycho-Oncology, Rehabilitation and Societal Oncology
QP Code: 9124

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

ANSWER ALL THE QUESTIONS **10 x 10 = 100 Marks**

1. Discuss the principles, methods and usefulness of screening for Breast cancer.
2. Precision medicine in treatment of newly diagnosed acute myeloid leukemia (AML)
3. First line immunotherapy options in newly diagnosed classical Hodgkin's lymphoma
4. Discuss the various phases of clinical trials.
5. Discuss how to break bad news while counselling a patient in the oncology clinic.
6. Organ preservation strategies in rectal cancer
7. Discuss the evaluation, differential diagnosis and management of pulmonary infiltrates in a patient with acute leukemia.
8. Define, risk stratify and discuss the management of febrile neutropenia.
9. Perioperative immunotherapy in NSCLC
10. Discuss the principles of donor lymphocyte infusion and indications of use.