Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 07-Jul-2023

Time: Three Hours | Max. Marks: 100 Marks

Radiotherapy - PAPER – I (RS-2/RS-3)
Applied Anatomy, Pathology, Radiation Physics, Radio Biology
Q. P. CODE: 7481

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. Describe the linear quadratic model of cell survival.
2. Define ''Penumbra'' in radiation therapy and describe the various types of penumbra and factors affecting it.
3. Describe 'Direct and Indirect' effects of radiation.
4. Describe the types of altered fractionation strategies in Head and Neck cancer and their rationale.
5. Discuss dose limits for radiation workers and personnel dose monitoring.
6. ICRU 50 and 62
7. Describe the anatomy of esophagus, is subdivisions and pathology and staging workup in Esophageal cancer.
8. Depth dose profile, techniques and advantages of proton therapy.
9. Respiratory gating in radiation therapy.
10. Discuss the indications and techniques of stereotactic radiosurgery.

Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 10-Jul-2023

[Time: 3 Hours] [Max. Marks: 100]

RADIOTHERAPY - PAPER- II (RS-2/RS-3)

Principles & Practice of Chemotherapy in Malignant Diseases, Preventive Oncology, Palliative Care

Q. P. CODE: 7482

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. Pre-treatment evaluation in the use of Trastuzumab and its current role in management of breast cancer.
2. Discuss cell cycle and the classification of chemotherapy based of cell cycle specificity.
3. What are monoclonal antibodies? Discuss in detail the mechanism of action, indications and toxicity of Bevacizumab.
4. Rational of neo adjuvant chemotherapy in Breast cancer.
5. What is superior venacaval syndrome and explain the management.
6. Morphine use in Cancer pain.
7. Role of EGFR and VEGF inhibitors in rectal cancer.
8. Immunotherapy in malignant melanoma.
9. BRCA mutations in breast cancer.
10. Cancer registry.

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Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 12-Jul-2023

Time: Three Hours | Max. Marks: 100 Marks

RADIOTHERAPY - PAPER- III (RS-2/RS-3)

General Principles of Radiotherapy and Oncology,
Principles and Practice of Radiotherapy of skin, Head & Neck,
Central and Peripheral Nervous System, GI Tract Tumors

Q. P. CODE: 7483

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. Explain about the indications and technique and doses of Radiotherapy in Postoperative Carcinoma Stomach.

2. What are the methods to decrease toxicity by conformal Radiotherapy in Head and Neck Carcinoma? Mention about the tolerance Doses to OAR's in Head and Neck.

3. a) Cyber knife b) Role of Neo Adjuvant chemo therapy in Head and Neck carcinoma

4. Discuss the management and Radiotherapy techniques in 10-year-old child with medulloblastoma.

5. a) Basal cell carcinoma b) Anaplastic Carcinoma Thyroid

6. Describe the basic principle of Re Irradiation. How do you manage a 40-year-old with Low grade Glioma of Right Temparo parietal region treated with Surgery and Radiotherapy, 3 years ago now with local recurrence

7. Role of chemo radiation in Anal carcinoma

8. a) Adaptive Radiotherapy b) Mucoepidermoid carcinoma of Parotid

9. a) Intraluminal Brachytherapy b) Iodine 131

10. Write the staging of Carcinoma Oro Pharynx and Guide lines for HPV Positive Stage III Carcinoma of Base of Tongue.

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Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 14-Jul-2023

[Time: 3 Hours] [Max. Marks: 100]

RADIOTHERAPY - PAPER- IV (RS-2/RS-3)

Principle and Practice of Radiotherapy of Thoracic Region, Including Breast, Genito Urinary System, Lymphoreticular System, Musculo-Skeletal System and Paediatric Tumors

Q. P. CODE: 7484

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. Explain management of Locally advanced Cervix cancer.
2. Craniospinal radiation in oncology.
3. Involved field radiation treatment in Non-Hodgkin's Lymphoma.
4. Role of Brachytherapy in endometrial cancer.
5. Discuss treatment options of Stage I testicular seminoma.
6. Toxicity of pelvic irradiation of various cancers.
7. Wilm's Tumour.
8. Accelerated partial Breast irradiation.
9. How will evaluate and briefly discuss the algorithm of management of a case of Anterior Mediastinal mass in a 20-year-old female.
10. Classify bone tumours. Discuss the treatment of extra osseous Ewing Sarcoma.

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Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 16-Dec-2023

Time: Three Hours | Max. Marks: 100 Marks

RADIOTHERAPY - PAPER – I (RS-2/RS-3)

Applied Anatomy, Pathology, Radiation Physics, Radio Biology

Q. P. CODE: 7481

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. Radioactive decay.
2. Characteristics of electron beam.
3. Immobilization methods.
4. Stochastic and non-stochastic effects of radiation.
5. Pathology of Non-Hodgkin's lymphoma including IHC.
6. Thermoluminescene dosimetry.
7. Cell survival curve.
8. Gamma knife.
9. Anatomy and lymphatic drainage of nasopharynx.
10. Pathology of wilms tumor.

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Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 18-Dec-2023

Time: Three Hours | Max. Marks: 100 Marks

RADIOTHERAPY - PAPER- II (RS-2/RS-3)
Principles and Practice of Chemotherapy in Malignant Diseases, Preventive Oncology, Palliative Care
Q. P. CODE: 7482

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. Classify malignant Lung tumors and discuss the role of Chemotherapy in the management of Non-metastatic Non-small cell lung cancer.
2. Describe the management of Rhabdomyosarcoma in a four-year-old child.
3. Anastrazole.
4. Evidence based medicine (EBM) in cancer management.
5. Gestational Trophoblastic disease management.
6. Gefitinib.
7. HPV vaccine.
8. WHO pain Ladder
9. Screening for Breast Cancer.
10. Role of Surgery in Palliation.

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Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 20-Dec-2023

[Time: 3 Hours] [Max. Marks: 100]

RADIOTHERAPY - PAPER- III (RS-2/RS-3)

General Principles of Radiotherapy and Oncology,
Principles and Practice of Radiotherapy of skin, Head & neck,
Central and Peripheral Nervous System, GI Tract Tumors.

Q. P. CODE: 7483

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. Classify **Brain** tumours and describe how do you manage a case of Glioblastoma multiformate in adult
2. Describe in detail the aetiology, pathology, clinical features, imaging and multimodality treatment of carcinoma rectum.
3. Describe the various levels of nodal involvement in head and neck cancers and the rationale of role of combined modality approach in neck and nodal management.
4. Describe the aetiology, clinical features, pathology and management of cancers stomach.
5. Discuss stereotactic radiosurgery (SRS) treatment for AV malformation with special mention of its radiobiological basis.
6. Reirradiation in Head and Neck cancers and tolerance doses of OARS.
7. Cutaneous ‘T’ cell lymphoma
8. T1N0M0 glottic cancer management.
9. Molecular targets in Colo-Rectal cancer
10. Write briefly on Orbital Tumours and management of Retinoblastoma.

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Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 22-Dec-2023

[Time: 3 Hours] [Max. Marks: 100]

RADIOTHERAPY - PAPER- IV (RS-2/RS-3)

Principle and Practice of Radiotherapy of Thoracic Region,
Including Breast, Genito Urinary System, Lymphoreticular System,
Musculo-Skeletal System and Paediatric Tumors

Q. P. CODE: 7484

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. Role of immunohistochemistry and molecular typing in the diagnosis of lung cancers. Discuss the management of T2N1M0 limited stage small cell carcinoma of lung.

2. Discuss the step involved in 3D conformal radiation therapy (3D CRT) for carcinoma of left breast.

3. Describe the management of cancer cervix stage IIIA

4. Discuss the treatment options for carcinoma prostate stage T1N0M0 with Gleason's score 8.

5. Discuss the aetiology, classification, diagnostic evaluation of testicular tumour and management of seminoma with radiotherapy techniques.

6. SGRT-Lung cancer

7. Management of Wilims tumour.

8. Stem cell therapy in various cancers.

9. Role of Immunohistochemistry in Lymphomas management of Hodgkin's lymphoma.

10. Immunotherapy in clinical practice.

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