Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 21-Jun-2024

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. Explain the principles of radiation protection with a note on personnel monitoring devices and maximum permissible dose (MPD).
2. Describe the four 'R's of radiobiology.
3. Define brachytherapy. Describe the radiobiological rationale for brachytherapy. What are the advantages of HDR brachytherapy over LDR brachytherapy?
4. Describe the parts of linear accelerator and requirements for housing linear accelerator.
5. What is IMRT? Describe in detail the advantages and disadvantages of IMRT with radiobiological basis.
6. Proton therapy.
7. Lymphatic drainage of cervix and describe viral aetiology of carcinoma Cervix.
8. Uses of compensators and multileaf collimators.
9. Role fine needle aspiration cytology and Tru-cut biopsy in diagnostic work up of cancer.
10. Immobilisation devices.

Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 24-Jun-2024

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. Discuss the management of osteosarcoma of distal Femur in a 12 year old boy.
2. Management of stage II Testicular non seminomatous germ cell tumor.
3. Discuss the strategies for primary and secondary prevention in Cervical cancers.
4. Treatment of EGFR mutant metastic non small cell lung cancer.
5. Outline the indications, rationale and treatment protocols for total neoadjuvant therapy in Rectal cancer.
6. Discuss the management of limited stage small cell Lung cancer.
7. Discuss the management of stages III Wilms tumor.
8. Outline the indications, mechanism of action, dose schedules and toxicities of Trastuzumab.
9. Outline the treatment protocol in stage IIB Hodgkins disease.
10. Discuss the management of malignant spinal cord compression.

Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 26-Jun-2024

[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. Management of basal cell carcinoma of face.
2. Discuss diagnostic work up in laryngeal cancer and treatment options in Carcinoma Larynx T3N0M0
3. Molecular classification of meduloblastoma and management protocol of high risk meduloblastoma.
4. Discuss indications and techniques of stereotactic radiosurgery in metastatic brain tumors.
5. Discuss pros and cons of short course versus long course radiation in Rectal cancer.
6. Discuss indications and dose schedules of radiotherapy in Melanoma.
7. Discuss indications, benefit and protocols for neo-adjuvant therapy in Pancreatic cancer.
8. Discuss target delineation and radiotherapy planning in Anal cancers.
9. Discuss late effects of CNS radiation and enumerate various organs at risk in CNS irradiation and their tolerance doses.
10. Discuss the basic principles of combining chemotherapy and radiation.

Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 28-Jun-2024

[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. Discuss indications, dose schedules and outcomes of SBRT in stage I non small cell lung cancer.

2. Discuss the rationale, indications, techniques and dose schedules in Accelerated Partial Breast Irradiation.

3. Discuss the workup and management of Thymoma.

4. Discuss the treatment options in Intermediate risk prostate cancer.

5. Discuss the management of optic pathway gliomas in children.

6. Discuss the diagnostic and staging work up multiple myeloma.

7. **Role of Brachytherapy in Carcinoma Cervix.**

8. Discuss the risk stratification and outline the management of stage I Endometrial cancers.

9. Discuss the role of RT in management of Retinoblastoma.

10. Discuss the management of early stage Follicular Lymphoma.

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