# Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 29-Jul-2021

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 in detail Time, Dose and Fractionation in Radiotherapy.
2. Write about Primary barrier, Secondary barrier and Maze.
3. Write short notes on – a) IGRT b) Photodynamic therapy.
4. Role of MRI in Radiotherapy planning
5. Explain about various immobilization Devices used in Radiotherapy.
6. Explain about set-up Errors during Radiotherapy planning and various methods to minimize them.
7. a) Pulse dose Brachytherapy b) Radioactive isotopes used in ocular malignancy
8. a) Dose Volume Histogram (DVH) b) Biological Effective Dose (BED)
9. Radio sensitizers and Radio protectors
10. WHO classification of CNS tumors

M.D. Degree Examination – 31-Jul-2021

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

## 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. Classification of chemotherapy drugs based on mechanism of action.
2. Role of toxicity of Lapatinib in Breast cancer?
3. Mechanism of action, role and toxicity of Fluoropyrimidyines.
4. Rationale of concurrent chemo radiation and role in cervix cancer.
5. What is tumour lysis syndrome and explain the Prophylaxis based on risk stratification.
6. Management of treatment related mucositis.
7. Explain the hall marks of cancer with suitable diagram.
8. Screening in Breast cancer.
9. Cancer vaccines.
10. Role of chemotherapy in the primary and relapsed setting of small cell lung cancer.

* * * * *

# Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 02-Aug-2021

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. Write about the Advantages and disadvantages of IMRT over 2D planning in Head and Neck carcinoma.
2. Write about WHO classification of CNS tumors and explain role of SRS in CNS tumor with technique and dosage.
3. a) Total skin electron beam irradiation b) Management of Oral complications due to Radiotherapy
4. Explain the management of Well differentiated Thyroid Cancer.
5. Short notes – a) Pleomorphic adenoma of parotid b) Brain stem Glioma
6. Short notes on – a) Mould therapy b) Prophylactic cranial RT in ALL
7. Describe the TNM staging of Carcinoma Nasopharynx and discuss the management of Ca. Nasopharynx T3 N2 M0.
8. Management of carcinoma esophagus – Middle 1/3$^{rd}$
9. Describe – a) Pre-cancerous lesions of Oral Cavity b) Cetuximab.
10. How do you manage a case of locally advanced Carcinoma Rectum?

M.D. Degree Examination – 04-Aug-2021

[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. 3D CRT in Cancer Breast-Technique.
2. Management of Figo stage III B Cancer Cervix.
3. Cancer prostate stage II management.
4. Diagnosis and staging work up in neuroblastoma.
5. Seminoma stage I treatment approach.
6. Radiotherapy role in small cell lung cancer.
7. Approach of organ preservation in carcinoma bladder.

8. Diagnosis and staging work up in carcinoma ovary.
9. Recent advances in non-small cell lung cancer management.
10. Management of mantle zone lymphoma.

# Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 12-Nov-2021

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 various altered fractionation schedules with Radio Biological Rationale.
2. Explain about quality Assurance in Radiotherapy.
3. Describe characteristics of ideal radioactive isotopes and explain about Ir.192.
4. Describe the principle in PET scan and role of PET in Radiotherapy.
5. Short notes on – a) Forest plot b) Radiotherapy induced myelopathy
6. Write about pathological classification of Hodgkin's lymphoma with an emphasis on IHC markers.
7. Perineal template
8. Explain basic principles of electron beam radiotherapy and its clinical uses.
9. Short notes on a) Lasers in Oncology b) Tomotherapy
10. Short notes on a) LENT – SOMASCALE b) Optimization in planning

*****

# Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 15-Nov-2021

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. Role of chemotherapy in Head and Neck cancers.
2. How do you manage stage II, Hodgkin's lymphoma?
3. Write about WHO Ladder of Pain.
4. Role of Radiotherapy in Benign conditions.
5. Prophylactic cranial irradiation.
6. Explain about screening guidelines and methods in carcinoma cervix.
7. Write about – a) RFA (Radio Frequency Abalation).
   b) TACE. (Trans Arterial Chemo Embolisation)
   c) TARE. (Trans Arterial Radio Embolisation)
8. Write about – a) Paclitaxel b) Bevacizumab.
9. Short notes on – a) Para neoplastic syndrome b) Giant cell tumors.
10. Genetic counselling of cancer patients.

*****

# Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 17-Nov-2021

[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. Discuss the lymphatics of stomach. Explain the role of radiation in gastric cancers.
2. Role and rationale of Hyperfractionation in head and neck cancers.
3. Molecular biology and its clinical relevance of gliomas.
4. Treatment of advanced non-metastatic rectal cancer.
5. Pre-operative chemoradiation in oesophageal cancer.
6. Metastatic malignant melanoma.
7. Role of radiation treatment in nasopharyngeal cancer.
8. Treatment of carcinoma T2N1MO Oropharyngeal cancer.
9. Hippocampal sparing radiation treatment.
10. Stereotactic radiation treatment brain metastases.

* * * * *

# Rajiv Gandhi University of Health Sciences, Karnataka

M.D. Degree Examination – 19-Nov-2021

[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. Accelerated partial Breast irradiation.
2. Involved field radiotherapy in Hodgkin's lymphoma stage I right neck
3. Superior vena cava obstruction management.
4. Remote after loading systems-advantages and disadvantages.
5. Management of Ewing's sarocoma in 11-year-old patient affecting right thigh.
6. Brachytherapy in prostate cancer.
7. Rapid ARC technique.
8. Wilms tumor management.
9. Rhabdomyosarcoma right nasal cavity in a six years old treatment.
10. Hormonal management in cancer breast.

* * * * *