

Reg. No.

MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

MD (RADIOTHERAPY) DEGREE EXAMINATION – JULY 2005

SUBJECT: PAPER I: BASIC SCIENCES IN RELATION TO RADIOTHERAPY

Monday, July 04, 2005

Time: 3 Hrs.

Max. Marks: 100

- ✍ Answer all the questions.
✍ Draw neat labeled diagrams wherever necessary.

1. Describe the anatomy and lymphatic drainage of Ovary. Classify ovarian tumors. (20 marks)

2. What is the physical basis for fractionation in radiotherapy? Describe in detail about hyper fractionation & accelerated fractionation in radiotherapy. (20 marks)

3. Write in detail about cell survival curve. (20 marks)

4. Write short notes on the following: (40 marks)
 - 4A. LQ model.
 - 4B. Radiation myelitis.
 - 4C. Integral dose.
 - 4D. Bromodeoxyuridine.

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MD (RADIOTHERAPY) DEGREE EXAMINATION – JULY 2005

SUBJECT: PAPER II: PHYSICS, NUCLEAR MEDICINE AND STATISTICS

Tuesday, July 05, 2005

Time: 3 Hrs.

Max. Marks: 100

- ✍ **Answer all the questions.**
✍ **Draw neat labeled diagrams wherever necessary.**

1. What are beam modifying devices? Describe about universal wedges.
(20 marks)

2. Describe in detail about X-rays production. What are the interactions of X-rays with matter?
(20 marks)

3. What are the dose equivalent limits as the present ICRP recommendations? Describe in detail about radiation protection.
(20 marks)

4. Write short notes on the following:
(40 marks)
 - 4A. Tc 99 m.
 - 4B. Quality assurance of simulator.
 - 4C. Student 't' test.
 - 4D. Biological half life.

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MD (RADIOTHERAPY) DEGREE EXAMINATION – JULY 2005

SUBJECT: PAPER III: CLINICAL RADIOTHERAPY AND CANCER CHEMOTHERAPY

Wednesday, July 06, 2005

Time: 3 Hrs.

Max. Marks: 100

✍ **Answer all the questions.**

✍ **Draw neat labeled diagrams wherever necessary.**

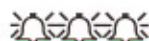
1. Describe the staging of carcinoma of maxillary antrum. How do you manage stage T3 N0 M0 carcinoma of maxillary antrum?
(20 marks)

2. Stage multiple myeloma. Describe the management of Plasmacytoma.
(20 marks)

3. Describe in detail the management of T1a N0 M0 staged carcinoma of vocal cords.
(20 marks)

4. Write short notes on the following:
(40 marks)
 - 4A. Apoptosis.
 - 4B. Anthracyclins.
 - 4C. Burkitt's Lymphoma.
 - 4D. Medroxy progesterone acetate.

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MD (RADIOTHERAPY) DEGREE EXAMINATION – JULY 2005

SUBJECT: PAPER IV: RECENT ADVANCES IN RADIATION ONCOLOGY

Thursday, July 07, 2005

Time: 3 Hrs.

Max. Marks: 100

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- ✍ Answer all the questions
 - ✍ Draw neat labeled diagrams wherever necessary.

1. What is stereotactic radiotherapy? Discuss in detail the steps involved in the SRT management of AV malformation of brain.

(20 marks)

2. What are the indications for elective cranial irradiation? Discuss in detail the management of small cell carcinoma of lung.

(20 marks)

3. Describe in detail the etiology, pathophysiology and management of Spinal cord compression in malignancies.

(20 marks)

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4. Write short notes on the following:

(40 marks)

- 4A. Multi leaf collimator.
- 4B. Capecitabine.
- 4C. Cyclotron.
- 4D. Letrazole.

