

Question Paper

Exam Date & Time: 30-May-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FOURTH SEMESTER M.Sc. (Medical Radiation Physics) DEGREE EXAMINATION - MAY/JUNE 2022
SUBJECT: MRP 702 - RECENT ADVANCES IN RADIOTHERAPY
(2018 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain in detail the procedure for Total Body Irradiation Therapy. (20)
- 2) Explain different wedge systems and their advantages. (20)
- 3A) Write a note on Image guided Brachytherapy. (10)
- 3B) What is cone beam CT? Explain the types of CBCT. What are the advantages and disadvantages of KVCBCT and MVCBCT? (10)
- 3C) Discuss in detail about X-ray knife. (10)
- 3D) Explain CT simulator. List the advantages. (10)
- 4A) Explain:
i) In room computed tomography scanner
ii) Helical tomotherapy (5)
- 4B) Explain with diagram any two mechanical tests for DMLC. (5)
- 4C) Mention the advantages and disadvantages of segmented and dynamic multileaf collimator delivery technique in IMRT. (5)
- 4D) Explain the general guidelines used for the patient positioning in XYZ method of isocenter setup. (5)

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