

Question Paper

Exam Date & Time: 21-Feb-2019 (02:00 PM - 05:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIFTH SEMESTER B.Sc. MEDICAL RADIOTHERAPY TECHNOLOGY DEGREE EXAMINATION - FEBRUARY 2019

**SUBJECT: BRTT 305 - RADIATION SAFETY
(2016 SCHEME)**

Thursday, February 21, 2019 (14.00 - 17.00)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Define LD 50. Write the difference between stochastic and deterministic effect. (20)
- 2) Write a note on different personnel monitoring devices. (20)
- 3A) Mention the responsibility of employer. (10)
- 3B) Briefly explain the radiation emergencies in radiotherapy facilities. (10)
- 4A) Discuss the different daily quality assurance tests to be performed for LINAC. (5)
- 4B) Write a short note on personal monitoring instruments. (5)
- 4C) Briefly explain the need of radiation protection. (5)
- 4D) Briefly explain dose limits prescribed by ICRP(60). (5)
- 4E) Mention the responsibility of Radiation Safety Officer. (5)
- 4F) Write a short note on inverse square law. (5)
- 5A) What are the advantages of film dosimeter? (2)
- 5B) Define stochastic and deterministic effect. (2)
- 5C) Mention the various categories of radiation quantities. (2)
- 5D) Define half life. (2)
- 5E) Define radiation weighting factor. (2)

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