

**B.Sc. IN RADIATION THERAPY TECHNOLOGY
(BRTT)**

00772

Term-End Examination

December, 2011

BAHI-034 : Radiotherapy Equipment and Physics

Time : 3 hours

Maximum Marks : 70

PART-A

Answer *any five* questions.

Each carries 8 marks.

8x5=40

1. (a) Enumerate various radiation monitoring devices.
(b) What is the basic principle of TLD ?
(c) Name radio sensitive materials used in TLD.
2. (a) Define various units of Radiation.
(b) Define RAD and REM.
(c) What are the SI units for absorbed dose ?
3. Draw with suitable diagram of Linac treatment head and explain the construction in detail.

4. Explain the types of Radioisotopes used in Teletherapy and Brachy therapy.
5. Describe Ionization Dosimeters. List the various types of survey meters and their functions in the field of Radiotherapy.
6. Explain the type of collimations and their uses. List the types of shutters and describe their advantages and disadvantages.
7. What is image guided Brachy therapy ? Describe clinical applications of brachytherapy in various disease conditions.

PART-B

Write short notes on *any five* of the following :

Each carries 6 marks.

6x5=30

1. Properties and clinical applications of electron therapy.
 2. Effective dose
 3. Principle of Radiosurgery
 4. Production of X-rays
 5. Photoelectric absorption
 6. Radium 226
 7. Principles of superficial therapy
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