

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

**Term-End Examination**

**December, 2013**

**BAHI-034 : RADIOTHERAPY EQUIPMENT AND  
PHYSICS**

*Time : 3 hours*

*Maximum Marks : 70*

**PART - A**

**8x5=40**

Attempt any 5 questions. Each carries 8 marks :

1. What steps will you take to ensure the maintainance of equipment in the Radiotherapy Deptt. of a 500 bedded hospital ?
2. Describe the steps involved in the delivery of a 3D conformal radiotherapy treatment.
3. What is multileaf collimator ? What is its clinical utility ?
4. What are the different types of immobilization devices that are used in the head & neck radiotherapy ?
5. What is the rationale behind the use of intro-operative Radiotherapy ? Describe the procedure and its use in different clinical situations.
6. What are the different steps involved in CT simulation and how does it differ from conventional simulation ?

7. What are the physical characteristics of electron beam ? How are they different from photon beam ?

**PART - B**

**6x5=30**

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

- (a) Role of Brachytherapy in Ca Prostate
  - (b) IMRT
  - (c) SI units used in Radiotherapy.
  - (d) Protocols for dose measurement.
  - (e) Electron shielding
  - (f) Radioisotopes in Radiotherapy.
  - (g) Photoelectric and Compton effect.
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