

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

**Term-End Examination  
June, 2012**

**BAHI-034 : Radiotherapy Equipment and Physics**

*Time : 3 hours*

*Maximum Marks : 70*

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**PART-A**

Attempt *any five* questions. Each carries  
8 marks : 8x5=40

1. What is image guided radiotherapy ? How does it differ from conventional radiotherapy ?
  
2. (a) What is Brachytherapy ?  
(b) Explain the construction and functions of Brachytherapy Equipments.
  
3. What are Radioisotopes ? Explain how Radioisotopes are used in different treatments for Radiotherapy.

4. Describe various types of interactions of radiation with matter. How they are applied in radiation treatment ?
5. Explain simulator CT and list the benefits of the same.
6. Describe the production of electron beam and its uses in Radiotherapy.
7. Explain the role of stereotactic radiotherapy and state how it is planned for treatment.

## PART-B

8. Write short notes on *any five* of the following

Each carries 6 marks :

6x5=30

- (a) Personal radiation safety and ALARA
  - (b) Cobalt 60
  - (c) Radiosurgery
  - (d) Types of shutters in collimators
  - (e) LINAC
  - (f) Phantoms in Radiotherapy
  - (g) Radiation monitoring devices.
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