

00404

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

Term-End Examination

December, 2014

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

Time : 3 hours

Maximum Marks : 70

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- Note : (i) Attempt **any five** questions from Part - A. Each question carries 8 marks.*
- (ii) Part - B consists of one question which is **compulsory**. It carries **30** marks.*
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PART - A

Answer **any five** questions.

1. Name various types of dosimeters. Describe briefly their properties. Explain Thermo-luminescent dosimetry system. **3+3+2=8**
2. Describe the functioning of a linear-accelerator with a neat diagram and state the advantages of Linear-Accelerator over cobalt machines. **3+3+2=8**
3. Explain the use of different modalities in treatment planning system. **8**
4. List the advantages and disadvantages of remote after loaders used in Brachytherapy. **8**

5. Explain the role and principles of 3D image guided Radiotherapy. 8
6. What are the principles of mega-voltage therapy and its clinical applications ? 4+4=8
7. Role of CT simulator in treatment planning system and other images from other modalities. 8

PART - B

8. Write short notes on **any five** of the following : 5x6=30
- (a) Beam collimation of photon Beam
 - (b) Area zone monitor
 - (c) Cobalt 60 units
 - (d) Cyber Knife
 - (e) Conformal Therapy
 - (f) Proton Beam Radiosurgery
 - (g) Phantoms and Boluses
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