

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

Term-End Examination

June, 2015

**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 type of dosimeters. Describe briefly their properties. Explain plastic scintillator dosimetry system. 2+3+3=8
2. Describe the construction of cobalt machine with neat diagram. 5+3=8
3. Explain the radiation treatment parameters. 8
4. Define volumes that aid in treatment planning process and provide the basis for comparison of treatment outcomes. 4+4=8

5. Describe the advantages and disadvantages of cobalt machine. 8
6. Explain the treatment time and monitor unit calculations for fixed SSD Setups and Isocentric Setups. 4+4=8
7. List the steps involved in conventional simulation procedure and in CT simulation procedure of a typical patient. 5+3=8

PART - B

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

5x6=30

- (a) Beam modifiers
 - (b) Radiation field analyzer
 - (c) Proton Therapy
 - (d) Advantages of Brachytherapy over teletherapy
 - (e) Isodose charts
 - (f) Simulation
 - (g) Gamma knife
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