

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

Term-End Examination

December, 2012

00645

**BAHI-039 : RADIOTHERAPY PROCESS AND
CONVENTIONAL TECHNIQUES**

Time : 3 Hours

Maximum Marks : 70

PART - A

Write short notes on *any six* of the following. Each carries 5 marks.

5x6=30

1. Importance of Patient Positioning and immobilization devices used in external beam Radiotherapy.
2. Role of conventional treatment simulator in the routine patient management.
3. Advantages and Disadvantages of 2D and 3D Treatment Planning.
4. Virtual Simulation.
5. Tissue Compensator.
6. Co-planar and non-coplanar beams with clinical treatment examples.

7. Tools used in external treatment planning evaluation.
8. Differences between physical and virtual wedges systems.
9. Technical factors affecting the radiation treatment outcome.

PART - B

Answer *any four* of the following. Each carries
10 marks.

10x4=40

1. Write in detail about the physical limitations of 2D - Radiotherapy Practice.
2. Describe the advantages and disadvantages of treatment of head and neck cancer using both cobalt machine and linear accelerators.
3. How will you manage pediatric patient with anesthesia condition while cobalt source has got struck ?
4. Explain the shielding materials used in external beam radiotherapy. Describe internal shielding and external shielding methods with clinical examples.
5. Write a detailed note about ICRU - 50 reports.
6. Describe the treatment techniques available for pre operative and post operative breast cancer in radiotherapy.
7. Explain about different types of electric portal imaging devices used in radiotherapy.