

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

**Term-End Examination**

**December, 2014**

00573

**BAHI-042 : RADIOTHERAPY PROCESS – II  
AND ADVANCED TECHNIQUES**

*Time : 3 hours*

*Maximum Marks : 70*

**PART A**

*Answer any five questions.*

*5×8=40*

1. (a) What are the immobilisation techniques available to treat brain tumours ?
- (b) State the critical structures to be spared while treating brain.
- (c) Which is the best beam arrangement technique in brain treatment ? *3+3+2=8*
  
2. (a) How do IMRT techniques help in treating head and neck cancers ?
- (b) What are the advantages of IMRT in head and neck cancers ?
- (c) What is Xerostomia ? *3+3+2=8*

3. (a) While treating Ca. breast electron-photon combination is used for some patients. Explain the reason.
- (b) State the purpose of using wedge angle in patient positioning.
- (c) What are the critical structures to be spared in Ca. breast treatment?  $3+2+3=8$
4. (a) Explain the use of brachytherapy in management of Ca. cervix.
- (b) What are the side effects we can expect?
- (c) How is it managed?  $4+2+2=8$
5. Explain about the following techniques:  $2+2+2+2=8$
- (i) IMRT
- (ii) IGRT
- (iii) VMAT
- (iv) SRS/SRT
6. Explain about on-board imaging techniques and their advantages. 8
7. (a) What is Record and Verify system?
- (b) Write the information that can be stored in R & V system.
- (c) What are the advantages of R & V?  $3+3+2=8$

8. (a) What is CT-simulator ?  
(b) How does it differ from diagnostic CT ?  
(c) Explain the advantages of CT-simulator.

3+3+2=8

## PART B

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

Each carries *six* marks.

$5 \times 6 = 30$

- (a) Wedge filter
  - (b) Palliative radiotherapy
  - (c) Bolus and its use
  - (d) CBCT
  - (e) German-helmet technique
  - (f) Grades of skin reaction
  - (g) Compensators
  - (h) Multi leaf collimators (MLC)
-