

B.Sc. RADIOTHERAPY TECHNOLOGY
(New Syllabus 2014-2015)
SECOND YEAR
PAPER III – RADIOTHERAPY TECHNIQUES

Q.P. Code: 801933

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Describe the indications, technique, dose and complications of radiotherapy in carcinoma breast.
2. Describe conventional technique for carcinoma maxilla including contour and distribution.
3. Describe any three immobilization devices and mention the possibility of errors with each of them.

II. Write notes on: **(8 x 5 = 40)**

1. HDR (high dose rate) Vs LDR (low dose rate) brachytherapy.
2. Advantages of CT simulator.
3. Compare and contrast wedges and compensators.
4. Treatment position verification methods.
5. Daily Quality assurance in Linear accelerator machine.
6. Radiation dermatitis and its management.
7. Dose volume histogram and mention its disadvantages.
8. Multileaf collimator.

III. Short answers on: **(10 x 3 = 30)**

1. Define set up errors and its types.
2. Cerrobend block - its composition.
3. Sources used commonly in high dose rate (HDR) brachytherapy and its half lives.
4. Which is better: SAD or SSD technique? Why?
5. Acute complications expected in radiation therapy to brain tumors.
6. Name 3 concurrent chemotherapeutic agents and the cancers in which they are used?
7. Mention dose rates for LDR, MDR and HDR.
8. Beam profile of proton beam therapy.
9. What care/preventive measures will you advise the patient to prevent radiation mucositis?
10. Which is the best radiation technique for carcinoma oropharynx and why?
