

B.Sc. RADIOTHERAPY TECHNOLOGY
(New Syllabus 2014-2015)

THIRD YEAR

PAPER I – RECENT ADVANCES IN RADIOTHERAPY TECHNIQUES

Q.P. Code: 801936

Time: Three Hours

Maximum: 100 Marks

Answer all questions

I. Elaborate on:

(3 x 10 = 30)

1. Intensity modulated radiotherapy.
2. Chemoradiation.
3. Image guided brachytherapy in carcinoma cervix.

II. Write notes on:

(8 x 5 = 40)

1. Immobilisation devices.
2. Respiratory gating in radiotherapy.
3. Cyberknife.
4. PET-CT in radiotherapy planning.
5. Intraoperative radiotherapy.
6. Linear energy transfer.
7. Mention any five radioisotopes with its properties and uses.
8. Dose volume histogram.

III. Short answers on:

(10 x 3 = 30)

1. Half value layer and its importance.
2. Characteristics of ideal brachytherapy source.
3. Spread out brag peak.
4. Oxygen effect.
5. RTOG grading of radiation induced mucositis.
6. What is HDR and radioisotopes used in HDR?
7. Monitor units.
8. Penumbra.
9. On board imaging.
10. Internal target volume.
