

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. PET CT in Radiotherapy Planning.
2. Advantages and Challenges of Image Guided Radiation Therapy.
3. Radioactive Isotopes used in Therapy.

II. Write notes on:

(8 x 5 = 40)

1. Workflow for 3D Conformal Radiation Therapy.
2. Gamma Knife based Radiosurgery.
3. Dynamic Arc.
4. Immobilization.
5. Errors in Radiotherapy.
6. Stereotactic Ablative Body Radiotherapy (SABR).
7. CT-MR Fusion in Radiotherapy Planning.
8. BRW frame and its use.

III. Short answers on:

(10 x 3 = 30)

1. Angiographic localizer box.
2. Radio sensitizers and common clinical use.
3. Mention briefly the indications for radiation in Benign diseases.
4. Indications for Proton Beam radiotherapy.
5. OARs in Pelvic Radiation therapy and their respective Dose constraints.
6. Types of Movements in 4D planning and treatment.
7. Imaging Techniques for IGRT.
8. Cancer Epidemiology in India.
9. Electron treatment techniques.
10. Interstitial Brachytherapy.
