

[LC 0413]

APRIL 2013

Sub. Code:4031

**M.Sc (MEDICAL PHYSICS) - DEGREE EXAMINATION
SECOND YEAR**

ADVANCED TECHNIQUES OF RADIOTHERAPY

Q.P. Code: 284031

Time: 3 hours

maximum: 100 marks

I. Elaborate on:

(2X20=40)

1. Describe in detail about different techniques of IMRT dose delivery system and commissioning procedures of IMRT for clinical use.
2. Describe in detail about the stereotactic radiosurgery and stereotactic radiotherapy techniques, immobilization, dosimetry and quality assurance protocol.

II. Write notes on:

(10X6=60)

1. HDR pre and post treatment safety checks and emergency procedures.
2. Electron arc therapy and dosimetry
3. Treatment planning of prostate radioactive seeds implantation
4. Arterial anatomy, angioplasty and restenosis treatment techniques
5. Treatment planning of 3DCRT
6. Image guided radiotherapy
7. Electronic brachytherapy
8. Dose volume histogram
9. Dose verification phantoms, dosimeters and protocol
10. kV cone beam CT and MU cone beam CT
