

[LN 1018]

OCTOBER 2018

Sub. Code: 4017

M.Sc. MEDICAL PHYSICS DEGREE EXAMS

FIRST YEAR

PAPER VII – PHYSICS OF RADIATION THERAPY

Q.P. Code : 284017

Time : Three hours

Maximum : 100 marks

I. Elaborate on :

(2 x 20 = 40)

1. Output calibration of electron beams using IAEA TRS 398 protocol.
2. Acceptance, commissioning and quality assurance protocol for installing a remote after loading brachytherapy equipment.

II. Write notes on:

(10 x 6 = 60)

1. Beam modifying and field shaping devices.
2. Klystron and Magnetron.
3. Relationship between Tissue Air Ratio and Percentage Depth Dose.
4. Isodose curves and charts.
5. Multileaf collimators.
6. Heavy ion therapy.
7. Electronic portal imaging device.
8. ICRU 38 and 58 protocols.
9. Monte Carlo based algorithms.
10. Ideal characteristics of brachytherapy source.
