

[LP 0819]

AUGUST 2019

Sub. Code: 1932

B.Sc. RADIOTHERAPY TECHNOLOGY

SECOND YEAR

PAPER II – RADIOTHERAPY EQUIPMENTS, APPLICATIONS & MAINTENANCE

Q.P. Code: 801932

Time: Three Hours

Maximum: 100 Marks

Answer all questions

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

1. Explain the methods to correct for contour irregularities.
2. Define the process of CT simulation.
3. Explain brachytherapy and its classification based on dose rate.

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

1. Explain autoradiography.
2. Write about Vande Graff Generator.
3. Write about penumbra.
4. Explain the characteristics of electron beam therapy.
5. Write about the mechanical QA checks in tele-Cobalt machine.
6. Isodose chart.
7. Microtron.
8. Distinguish between magnetron and klystron.

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

1. OFF Axis ratio.
2. ICRU - 50.
3. What is wedge angle and write the relationship between wedge angle and hinge angle?
4. Grenz therapy.
5. Kilovoltage unit.
6. What are heavy particles/mention its use in radiotherapy?
7. What is PTV?
8. Beam directional devices.
9. What is timer error?
10. Calculate the equivalent square field for $25 \times 10 \text{ cm}^2$.
