THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321] MARCH 2021 Sub. Code: 1908

(AUGUST 2020 EXAM SESSION)

B.Sc. RADIOTHERAPHY TECHNOLOGY

FIRST YEAR (Regulations 2014-2015)

PAPER III – RADIOTHERAPY PHYSICS AND PRINCIPLES OF RADIOTHERAPY

Q.P. Code : 801908

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

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

1. Explain the working of linear accelerator with suitable diagram.
2. Explain about remote afterloading Brachytherapy system and its advantages.
3. Explain in detail the interaction of Photon with matter.

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

1. Wedge filters and its application in radiotherapy
2. Intensity Modulated radiotherapy
3. Patient immobilization devices
4. SSD and SAD technique
5. Radioisotopes used in Medicine
6. Isodose curves
7. Radioactive equilibrium
8. Factors used for SSD and SAD treatment time calculation.

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

1. What is Bolus in RT?
2. Define BSF.
3. Define TAR.
4. Biological half life
5. What is LET?
6. Define HVL.
7. Define Wedge Angle.
8. Port Film
9. List the different types of shutter system used in telecobalt unit.
10. What is the purpose of cytotoxic drugs?

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