

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

**[AHS 1023]**

**OCTOBER 2023**

**Sub. Code: 2404**

**M.Sc. RADIOTHERAPY TECHNOLOGY  
FIRST YEAR (From 2020-2021 onwards)  
PAPER V – ADOPTION OF NEW RADIOTHERAPY TECHNOLOGY,  
RADIATION HAZARDS, EVALUATION AND CONTROL**

*Q. P. Code: 282404*

**Time: Three hours**

**Maximum: 100 Marks**

**Answer ALL Questions**

**I. Elaborate on:** **(2 x 20 = 40)**

1. Physical components of a linear accelerator.
2. Tabulate the daily weekly monthly and annual quality assurance programme for a cobalt- 60 unit and its corresponding action levels.

**II. Write notes on:** **(10 x 6 = 60)**

1. Personnel monitoring devices.
2. Role of technicians in handling radiation emergencies.
3. Quality assurance checks for a CT simulator.
4. Beam Modifying Devices.
5. Acceptance tests.
6. Explain photo-electric and Compton Effect with examples.
7. List the different types of shutter systems used in Telecobalt machines.
8. Functions of Regulatory Body.
9. Optical and radiation field congruence.
10. Measurement and uses of half value thickness and tenth value thickness.

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