

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

[AHS 0321]

MARCH 2021

Sub. Code: 2404

(OCTOBER 2020 EXAM SESSION)

M.Sc. RADIOTHERAPY TECHNOLOGY

FIRST YEAR (From 2019-2020 onwards)

**PAPER IV – ADOPTION OF NEW RADIOTHERAPY TECHNOLOGY,
RADIATION HAZARDS, EVALUATION AND CONTROL**

Q.P. Code : 282404

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Tabulate the daily weekly monthly and annual quality assurance programme for a cobalt-60 unit and its corresponding action levels.
2. What are the various Procedures followed for calibration of measuring and monitoring instruments.

II. Write Short Notes on:

(10x6 = 60)

1. Role of technicians in handling radiation emergencies.
2. Quality checks for Isocentre alignment
3. Explain photo-electric and compton effect with examples.
4. How do you monitor a dosimetric error and a geometric error.
5. Personnel monitoring devices.
6. What are the common procedures followed for calibration of measuring and monitoring instruments.
7. Acceptance tests.
8. Constancy checks.
9. Percentage depth dose.
10. Optical and radiation field congruence.
