

QP Code: 101117

Reg. No.:.....

**PG Degree Regular/Supplementary Examinations in Radiation
Oncology (MD) June 2024**

Paper I – Radiation Physics, Radiobiology & Other Basic Sciences

Time: 3 hrs

Max marks:100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essay: (20)

1. (a) Describe linear accelerator with a neat labelled diagram
(b) Compare x-ray, Gama ray and electron with respect to physical property and clinical use (10+10)

Short essays: (8x10=80)

2. Define LET, RBE and OER. Write a graph depicting the same
3. Gec estro guidelines in contouring for IGBT in carcinoma cervix.
4. Acute Radiation syndrome
5. Phases of clinical trials and give three examples of randomised controlled trial involving Radiotherapy
6. What are BETA emitters in radiotherapy and explain their clinical uses
7. Brachytherapy applicators in carcinoma endometrium
8. Write a note on hyperthermia and principle of combining hyperthermia with Radiation
9. Personal monitoring devices
