



**PZ-5122**

Seat No. \_\_\_\_\_

**M. D. (Branch - XV) Examination**

**July - 2020**

**Radiotherapy : Paper - I**

***(Radio-Physics & Applied Basic Science)***

Time : 3 Hours]

[Total Marks : 100

- Instructions :**
- (1) Write legibly, no marks are given for unreadable material.
  - (2) Figures to the right indicate full marks.
  - (3) Answer to the point.
  - (4) All questions carry equal marks.

- 1** Define and classify different type of Brachytherapy. **20**  
Describe Paris system of Interstitial Brachytherapy in detail.
- 2** Discuss in detail interaction of Radiation with matter **20**  
with relative importance of different attenuation process at various energies.
- 3** Draw a labelled diagram of a Linear accelerator. Discuss **20**  
in detail various parts of modern linear accelerator.
- 4** Attempt both (a) and (b) : **20**
  - (a) Describe Radiation Syndromes in detail.
  - (b) Wedge systems (External, Inbuilt universal, Dynamic/Virtual)
- 5** Write short notes on : **20**
  - (a) 5 R's of Radiobiology
  - (b) Maximum Permissible Dose
  - (c) Beam Profiles
  - (d) Nuclear Transformation.