

**QP Code: 101117**

**Reg. No.:.....**

**PG Degree Supplementary Examinations in Radiotherapy (MD)  
October 2018**

**Paper I – Radiation Physics, Radiobiology & Other Basic Sciences**

**Time: 3 hrs**

**Max marks:100**

- *Answer all questions*
- *Draw diagrams wherever necessary*

**Essay:**

**(20)**

1. Describe the working, advantages and disadvantages of tele cobalt machine compared to the medical linear accelerator.

**Short essays:**

**(8x10=80)**

2. Define hyperthermia. Describe briefly on the clinical uses of hyperthermia with radiotherapy.
3. After loading interstitial implant systems.
4. Physical properties and clinical utilities of iodine-131
5. Discuss the benefit of concomitant boost radiotherapy with respect to radiobiology.
6. Clinical application of proton therapy
7. Integral dose in specialized radiation techniques.
8. Fraction size and overall treatment time: its influence on early and late responding tissues.
9. Oxygen effect.

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