[LJ 0816] AUGUST 2016 **Sub. Code: 1923**

B.Sc. RADIOTHERAPY TECHNOLOGY
THIRD YEAR
PAPER III – RADIATION HAZARDS, CONTROL AND SAFETY

Q.P. Code: 801923

Time: Three Hours **Maximum: 100 Marks**

Answer all questions

I. Elaborate on: **(3 x 10 = 30)**

1. Draw AERB approved layout for 15 MV linear accelerator and explain room shielding design and radiation safety.
2. Quality Assurance tests for cobalt 60 teletherapy machine.
3. Radiation protection survey and workload calculation for cobalt 60 machine.

II. Write notes on: **(8 x 5 = 40)**

1. Define and units of effective dose and Dose equivalent.
2. Stochastic and Non stochastic effect.
3. Principles of Radiation protection.
4. What is personnel monitoring devices? How to use TLD badge?
5. General QA test for Brachytherapy unit.
6. ICRP-60 and AERB guidelines.
7. Radiation survey meter.
8. Simulator unit.

III. Short answers on: **(10 x 3 = 30)**

1. Roentgen.
2. Absorbed dose.
3. REM.
4. Radiation does Limit.
5. Radiation units.
6. Duties of Radiation personnel.
7. What is equivalent dose?
8. IAEA and WHO.
9. Define Primary and secondary barrier.
10. How to control Radiation effects?

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