[LL 0817] AUGUST 2017 **Sub. Code: 2122**

B.Sc. NUCLEAR MEDICINE TECHNOLOGY

THIRD YEAR

PAPER II – RADIATION BIOLOGY AND RADIATION SAFETY IN NUCLEAR MEDICINE

Q.P. Code: 802122

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

Answer all questions

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

1. Write in detail about radiation risks.
2. Describe the effects of radiation on embryo.
3. Enumerate the maximum permissible levels of radiation to public and radiation workers.

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

1. Contamination monitoring.
2. TLD.
3. Calculation of Effective Dose.
4. Radiation protection for occupational workers.
5. Internal radiation hazard / internal contamination.
6. Carcinogenesis due to radiation.
7. Define LET and mention the LET for various type of radiation.
8. LD50/60.

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

1. Swipe sampling.
2. Mutation.
3. FDG storage container.
4. Radiation sickness.
5. Examples of nonionizing radiation.
6. HVT.
7. MIRD.
8. Beta particles properties.
9. Chromosomal aberration.
10. Stochastic effects.

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