

B.Sc. NUCLEAR MEDICINE TECHNOLOGY

THIRD YEAR

**PAPER II – RADIATION BIOLOGY & 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 about the choice of radiopharmaceutical for the clinical situation and equipments in hand in your hospital.
2. Describe the effects of radiation on embryo.
3. Enumerate the maximum permissible levels of radiation to public and workers handling radio active equipment (Whole body and organs).

II. Write notes on:

(8 x 5 = 40)

1. PET CT Dosimetry.
2. Protective clothing.
3. Principle of contamination clothing disposal in N.M.
4. LD50/60.
5. ALARA.
6. ALI.
7. Hematopoietic syndrome.
8. I=I₀e^{-μX}.

III. Short answers on:

(10 x 3 = 30)

1. Medium of radiation protection.
2. Working of pocket dosimeter.
3. Barrier nursing.
4. GM counter.
5. Late effects of radiation.
6. Duration of fetal period.
7. Cerebrovascular syndrome.
8. FDG storage containers.
9. Use of different filters in film badge.
10. Various instruments used in radiation monitoring.