



- 5) Nuclear disintegration of radioactive isotopes produce \_\_\_\_\_.
- a)  X-ray
  - b)  Gamma-rays
  - c)  Alpha Particles
  - d)  Beta Particles
- 6) What is the full form of DLP?
- a)  Dose Linear Product
  - b)  Dose Length Product
  - c)  Dose Linear Packet
  - d)  Dose Length Packet
- 7) Sum of scattered and leakage radiation is:
- a)  Total Radiation
  - b)  Stray Radiation
  - c)  Primary Radiation
  - d)  Secondary Radiation
- 8) Minimum protective lead equivalents in hand gloves and thyroid shields should be \_\_\_\_\_ mm.
- a)  1.0
  - b)  0.5
  - c)  0.25
  - d)  5.0
- 9) SI unit of exposure is?
- a)  Roentgen
  - b)  Coulombs / Kg
  - c)  Sievert
  - d)  REM
- 10) In fluoroscopy, skin entrance dose rate should not exceed \_\_\_\_\_ mGy/min
- a)  100
  - b)  75
  - c)  50
  - d)  25

**BACHELOR OF SCIENCE (RADIOLOGY & IMAGING TECHNOLOGY) (CBCS-  
2019 COURSE)**

**B.Sc. (R&IM) Sem-IV :SUMMER- 2022**

**SUBJECT : RADIATION SAFETY**

Day : Tuesday

Date : 19-07-2022

**S-22521-2022**

Time : 10:00 AM-12:00 PM

Max. Marks : 60

**N.B.:**

- 1) There are Three sections as  
Section -A = Objective Type questions 20 Marks.  
Section -B = Long Answer Questions 20 Marks.  
Section -C = Short Answer Questions 20 Marks.
  - 2) Section B has four long questions and **ANY TWO** have to be answered.
  - 3) Section C has six short questions and **ANY FOUR** have to be answered.
  - 4) Answer to both sections should be written in same answer book.
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**SECTION – B**

**Q.1** Answer **ANY TWO** out of **FOUR** questions: [10 x 2 = 20]

- a) What are three major ways in which radiation is absorbed and results in ionization?
- b) What are the different standards for X-ray equipment?
- c) What are the different aspects of shielding? Write in detail.
- d) What is the full form of ALARA? Explain in detail.

**SECTION – C**

**Q.1** Answer **ANY FOUR** out of **SIX** questions: [5 x 4 = 20]

- a) What is the minimum recommended thickness of lead apron? How should one take care of lead aprons?
- b) What is (i) RAD and (ii) REM
- c) What can be the effects of radiation during Pregnancy?
- d) Write is short about patient protection from radiation during mammography.
- e) Define the following terms:
  - i) Primary Beam
  - ii) Leakage Radiation
- f) Define the following terms:
  - i) Scattered Radiation
  - ii) Stray Radiation

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