Total No. of Pages : 02

Total No. of Questions : 11

M.Sc. (Radiology & Imaging Technology) (Sem.-3) NUCLEAR MEDICINE IMAGING TECHNIQUES Subject Code : MRIT303-21 M.Code : 92656 Date of Examination : 16-12-22

Time: 3 Hrs.

Max. Marks: 70

INSTRUCTIONS TO CANDIDATES :

- 1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
- 2. SECTION B & C. have FOUR questions each.
- 3. Attempt any FIVE questions from SECTION B & C carrying TEN marks each.
- 4. Select atleast TWO questions from SECTION B & C.

SECTION-A

- **1.** a) Write the structure and composition of atom.
 - b) What do you understand by radioactive decay?
 - c) What is radioactivity and its properties.
 - d) What are Electronic collimators?
 - e) What is the unit of atom?
 - f) Give applications of scanning camera.
 - g) Write the working principle of scintillation detector.
 - h) Define gas filled radiation detectors with its types.
 - i) Write note on nuclear physics.
 - j) What is Radio pharmacy?

SECTION-B

- 2. Write the composition of atom.
- 3. Discuss in detail about preparation of cold kit.
- 4. Write a Basic principle of proportional counters.
- 5. Explain about the accelerator produced radionuclides and its applications.
- 6. Write a principle of radionuclides.
- 7. Discuss in detail about production of radionuclides.
- 8. Elaborate the principle of radiation detector.
- 9. What are Radiopharmaceuticals? Write any 5 important applications of Radiopharmaceuticals in medicine field.

SECTION-C

10. Discuss in detail about general principle of tracer technique and radiation safety in Nuclear Medicine.

OR

Give brief discussion about radiation monitoring, handling and storage of radioactive materials.

11. Write in detail about instrumentation, basic principle of anger camera, image display and recording system.

OR

Write note on :

- (a) Geiger-muller conductors
- (b) Scintillation detectors.

NOTE : Disclosure of Identity by writing Mobile No. or Marking of passing request on any paper of Answer Sheet will lead to UMC against the Student.