[LJ 0816] AUGUST 2016 **Sub Code: 1822**

B.Sc. RADIOLOGY IMAGING TECHNOLOGY /
RADIO DIAGNOSIS TECHNOLOGY

THIRD YEAR

PAPER II – MODERN IMAGING TECHNIQUES AND RECENT TRENDS IN IMAGING

Q.P. Code: 801822

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

Answer All questions.

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

1. Discuss in detail the principle and working of a gamma camera.
2. Discuss in detail the principle and working of a PET CT scanner.
3. Discuss about various radiopharmaceuticals used in nuclear medicine.

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

1. Radioisotope Generator.
2. Discuss about 2 radioisotopes used as a therapeutic agent in nuclear medicine.
3. Artifacts in PET-CT.
4. Briefly describe the basic principle of operation of gas-filled radiation detectors.
5. Nuclear imaging in myocardial perfusion.
6. NaF18 PET/CT.
7. MIBG scan.
8. Delay tank.

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

1. Name a few radioactive isotopes.
2. Photomultiplier tube.
3. What is binding energy?
4. Parallel multi-hole collimator.
5. Detectors in PET-CT.
6. DMSA scan.
7. Inverse square law.
8. Mass Attenuation Coefficient.
9. What is low dose CT?
10. What is invivo Dosimetry?

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