

**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 radioisotopes used in diagnostic and therapeutic nuclear medicine.
2. Describe about the mechanism of radioactive decay.
3. Discuss about radiation safety in nuclear medicine.

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

1. Cyclotron.
2. PET-CT imaging fusion.
3. Filtered back projection.
4. Artefacts in CT.
5. Nuclear imaging in myocardial perfusion.
6. Low pass and high pass filter.
7. Discuss on how to handle radiopharmaceuticals?
8. Rectilinear scanner.

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

1. Units of radioactivity.
2. Photomultiplier tube.
3. Contamination monitor.
4. Fan beam collimator.
5. Name a few radioactive isotopes.
6. GFR.
7. Secular equilibrium.
8. Molybdenum generator.
9. What is low dose CT?
10. Reactor produced radionuclides.