[LL 0817] AUGUST 2017 **Sub. Code: 2123**

B.Sc. NUCLEAR MEDICINE TECHNOLOGY
THIRD YEAR
PAPER III – QUALITY ASSURANCE IN NUCLEAR MEDICINE

Q.P. Code: 802123

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

Answer all questions

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

1. Enumerate operating care, maintenance of Gamma Camera, Quality Control and caution taken in case of non-uniformity.
2. Brief the routine daily check Quality control of gamma camera, dose Calibrator and uptake probe.
3. Describe the steps to be followed for Quality standard such as ISO 9001 / NABH in Nuclear Medicine Department.

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

1. Write the test for Volume response of the system in PET scan.
2. Explain the test for precision and Linearity for Radiation survey meter.
3. Modulation transfer function.
4. Spatial resolution.
5. Explain the test for Energy Window calibration/Energy spectrum in Scintillation detector.
6. External factors affecting Gamma Camera performance.
7. Counter rate capability.
8. Field uniformity.

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

1. Image quality.
2. COR alignment.
3. Background counts.
4. Linearity check.
5. Attenuation and scatter correction.
6. Constancy.
7. Radioactive spills.
8. Disposal of radioactive waste.
9. CDC Standard Precautions.
10. Scintillation Detector System.

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