[LH 0815] **AUGUST 2015** **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 the acceptance tests during installation of gamma camera.
2. Describe the routine daily check (quality control of gamma camera, *dose* calibrator and uptake probe.
3. Define flood check, linearity, uniformity, dead time, resolution for gamma camera.

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

1. NEMA protocol.
2. External factors affecting Gamma camera performance.
3. Spatial linearity.
4. Field uniformity.
5. Spatial resolution.
6. Energy resolution.
7. Count rate capability.
8. Sensitivity.

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

1. Define quality control in NM.
2. Test for spatial resolution of point source in PET scan.
3. Survey meter.
4. Gamma zone monitor.
5. Photo peak.
6. Scintillation detector.
7. Test for volume response of the system in PET scan.
8. Energy resolution.
9. Sino gram.
10. FWHM and pixel size selection in SPECT.

****