

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. NEMA System Spatial resolution test for a gamma camera.
2. Explain the calibration of uptake probe.
3. Enumerate on the acceptance test of a SPECT gamma camera.

II. Write notes on:

(8 x 5 = 40)

1. Procedure to test the dead time of a gamma camera.
2. Focal distance calibration for a thyroid uptake probe.
3. Differential Uniformity.
4. Registration test for a SPECT CT system and its significance.
5. Tomographic resolution.
6. Normalization of PET scanner.
7. Bulls eye artefact on SPECT image.
8. COR test.

III. Short answers on:

(10 x 3 = 30)

1. Preventive maintenance service.
2. List four tests for radiation survey-meter.
3. Beam hardening artifact.
4. Energy resolution.
5. FWTM.
6. Daily tests for a gamma camera.
7. Test for a gamma zone monitor.
8. Ring artefact on CT image.
9. Factors affecting intrinsic resolution of a gamma camera.
10. Count rate capability test for gamma camera.
