

NUCLEAR MEDICINE**PAPER – II**

Time : 3 hours
Max. Marks : 100

NM/D/17/24/II

Important instructions:

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

Write short notes on:

1. Quality control tests required for a radiopharmaceutical before injection to a patient. 10
2. Radiopharmaceuticals used for hypoxia imaging. 10
3. a) Fluoro estradiol (FES) PET/CT imaging. 5+5
b) PSMA PET/CT Imaging.
4. Principles of small molecular imaging with PET/CT & clinical applications. 10
5. Quantitative parameters in myocardial perfusion with SPECT/CT scintigraphy. 10
6. a) C-14 urea breath test. 5+5
b) GFR estimation using plasma sample method
7. Radiopharmaceuticals used in patients of gastrointestinal bleeding. 10
8. PET/CT imaging in a patient with progressive memory loss. 10
9. Mechanism of localization of various radiopharmaceuticals. 10
10. Nuclear Medicine techniques for estimation of: 5+5
a) RBC cell mass
b) RBC cell survival
