

NUCLEAR MEDICINE**PAPER-II**Time: 3 hours
Max. Marks:100

NM/J/20/24/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. Thyroid uptake probe – working principle and uses. 10
2. Routes of administration of radiopharmaceuticals with examples 10
3. Enumerate and briefly describe generator produced PET radiopharmaceuticals. 10
4. What are the various quantitative PET parameters? Describe the various factors affecting such parameters. 6+4
5. FDG synthesis and its quality control. 10
6. a) Ideal characteristics of therapeutic radionuclides. 5+5
b) Tau imaging in dementia.
7. a) Attenuation correction. 5+5
b) Dead Time.
8. What are filters? Describe various types of filters in nuclear medicine. 10
9. Describe patient preparation & interpretation of cardiac PET-CT in the following: 5+5
a) Cardiac sarcoidosis.
b) Myocardial viability.
10. Glomerular and tubular renal radiopharmaceuticals – mechanism of extraction by the kidney, relative advantages and limitations. 10
