

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

NM/J/19/24/IV

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:

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| 1. MIBG therapy in recurrent/residual Neuroblastoma: Dose, patient preparation and precautions. | 2+4+4 |
| 2. PET radiopharmaceuticals beyond FDG. | 10 |
| 3. Clinical applications of PET/MRI and its advantages over PET/CT imaging. | 5+5 |
| 4. Theranostic role of PSMA based radiopharmaceuticals in prostate cancer. | 10 |
| 5. a) Describe in details various transport indices.
b) Law of Bergonie and Tribondeau. | 5+5 |
| 6. a) Tau Imaging.
b) TRODAT. | 5+5 |
| 7. a) What is Deauville Score in PET Imaging of Lymphoma?
b) PERCIST and RECIST in treatment response evaluation in Gastrointestinal stromal tumours. | 5+5 |
| 8. a) PET/CT in parathyroid imaging.
b) PET/CT imaging in angiogenesis. | 5+5 |
| 9. a) Ac-225 based therapy.
b) CXCR4 PET/CT Imaging. | 5+5 |
| 10. a) Radiation Hormesis.
b) Biological effects of radiation. | 5+5 |
