

**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:**

- |  |       |
|--|-------|
| 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.<br>b) Law of Bergonie and Tribondeau.   | 5+5   |
| 6. a) Tau Imaging.<br>b) TRODAT.   | 5+5   |
| 7. a) What is Deauville Score in PET Imaging of Lymphoma?<br>b) PERCIST and RECIST in treatment response evaluation in Gastrointestinal stromal tumours. | 5+5   |
| 8. a) PET/CT in parathyroid imaging.<br>b) PET/CT imaging in angiogenesis.   | 5+5   |
| 9. a) Ac-225 based therapy.<br>b) CXCR4 PET/CT Imaging.  | 5+5   |
| 10. a) Radiation Hormesis.<br>b) Biological effects of radiation.  | 5+5   |

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