

NUCLEAR MEDICINE

PAPER – III

NM/J/17/24/III

Time : 3 hours

Max. Marks : 100

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. a) What is dosimetry? 2+8
b) Principles of dosimetry in Nuclear Medicine therapy.
2. An 8-year old child with 3cm size thyroid nodule in left lobe and hard bilateral neck nodes presented to you. How are you going to manage the child? 10
3. a) Recombinant human TSH 5+5
b) α - emitters in therapeutic Nuclear Medicine.
4. a) RET mutation 2.5x4
b) BRAF mutation
c) RET/PTC
d) Tyrosine kinase inhibitors (TKIs)
5. a) Lugano Classification of lymphoma. 5+5
b) Interventions in PET imaging.
6. a) Appropriate criteria for skeletal scintigraphy in prostate and breast cancer. 5+5
b) Appropriate criteria for myocardial perfusion imaging.
7. a) Radionuclide bone pain palliation. 5+5
b) Radiosynovectomy
8. Radionuclide therapies in the management of inoperable hepatocellular carcinoma. 10
9. Role of Nuclear Medicine in the management of antenatally diagnosed hydronephrosis. 10
10. Role of Nuclear Medicine in the management of neuroblastoma in a 2-year old child. 10
