



NUCLEAR MEDICINE

PAPER – II

NM/D/14/24/II

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. Enumerate the principles of renal clearance studies. Describe ^{99m}Tc -DTPA 2-sample plasma GFR estimation method. 4+6
2. Physiological gating methods in nuclear medicine applications. 10
3. a) Myocardial viability studies 5+5
b) ^{68}Ga -PSMA
4. Enumerate various pharmacological stress agents. Describe indication/contraindication of each agent. 4+6
5. Differential diagnosis of various movement disorders and how nuclear medicine investigations can help in diagnosis. 5+5
6. a) ^{18}F -Fluorothymidine (FLT) 2.5x4
b) ^{11}C -methionine
c) ^{18}F -Choline
d) ^{18}F -Fluoroethyl tyrosine (FET)
7. a) SPECT evaluation of drug refractory focal epilepsy. 5+5
b) SISCOM.
8. Functional evaluation of Gall bladder in a middle-aged female who complains of postprandial pain in upper abdomen. 10
9. a) PET/CT imaging of hyperparathyroidism. 5+5
b) PET/CT imaging of nasopharyngeal carcinoma.
10. Various intervention procedures in nuclear medicine investigations. 10
