NUCLEAR MEDICINE
PAPER – 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 99mTc-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) 68Ga-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) 18F-Fluorothymidine (FLT) 2.5x4
   b) 11C-methionine
   c) 18F-Choline
   d) 18F-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

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