

National Board of Examinations

Question Paper Name :	DNB Nuclear Medicine Paper2
Subject Name :	DNB Nuclear Medicine Paper2
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DNB Nuclear Medicine Paper2

Group Number :	1
Group Id :	3271871494
Group Maximum Duration :	0
Group Minimum Duration :	180
Show Attended Group? :	No
Edit Attended Group? :	No
Group Marks :	100
Is this Group for Examiner? :	No
Examiner permission :	Cant View
Show Progress Bar? :	No

DNB Nuclear Medicine Paper2

Section Id :	3271871497
Section Number :	1
Section type :	Offline

Mandatory or Optional :	Mandatory
Number of Questions to be attempted :	10
Section Marks :	100
Enable Mark as Answered Mark for Review and Clear Response :	Yes
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	3271871501
Question Shuffling Allowed :	No
Is Section Default? :	null

Question Number : 1 Question Id : 32718714132 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Please write your answers in the answer booklet within the allotted pages as follows:-

Question Number	Answer to be attempted within	Question Number	Answer to be attempted within
Q. 1	Page 1-5	Q. 6	Page 26-30
Q. 2	Page 6-10	Q. 7	Page 31-35
Q. 3	Page 11-15	Q. 8	Page 36-40
Q. 4	Page 16-20	Q. 9	Page 41-45
Q. 5	Page 21-25	Q. 10	Page 46-50

1. Discuss the operational principle of radionuclide generator system with diagram. Describe the radionuclide and radiochemical purity of a freshly prepared Tc-99m Radiopharmaceutical kit. [10]

Question Number : 2 Question Id : 32718714133 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Discuss the various SPECT and PET radiopharmaceuticals used in imaging the neuroendocrine tumors. Write about their advantages and disadvantages. Describe any one of the radiopharmaceuticals being used in therapy for neuroendocrine tumors. [10]

Question Number : 3 Question Id : 32718714134 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

- a) Geiger Muller counter. [5]
- b) Dose calibrator. [5]

Question Number : 4 Question Id : 32718714135 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

- a) Principle, design and use of intra-operative gamma probe. [5]
- b) Nuclear reactor produced radionuclides of clinical importance. [5]

Question Number : 5 Question Id : 32718714136 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

- a) Describe any two phantoms used in nuclear medicine. [5]
- b) Solid state detectors. [5]

Question Number : 6 Question Id : 32718714137 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

- a) Personal monitoring devices. [5]
- b) Ga-68 radiopharmaceuticals and their impact on molecular imaging. [5]

Question Number : 7 Question Id : 32718714138 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction

Time : 0

Correct Marks : 10

Discuss the principle, working and quality control tests of Thyroid Uptake Probe. [10]

Question Number : 8 Question Id : 32718714139 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Discuss transient and secular equilibrium – concept, examples and relevance in nuclear medicine practice. [10]

Question Number : 9 Question Id : 32718714140 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

a) Filters used in SPECT. [5]

b) Time of flight in PET. [5]

Question Number : 10 Question Id : 32718714141 Question Type : SUBJECTIVE Consider As Subjective : Yes Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0

Correct Marks : 10

Discuss the different methods of RBC labelling. Write about the factors affecting RBC labelling. Give any three examples of studies done with RBC labelled tracer. [10]