

ALL INDIA INSTITUTE OF MEDICAL SCIENCES

Name of Course : Paper No./Section

Max.Marks: Time Allowed : 3 hours Month/Year of Exam :

1. All Questions are compulsory
2. Questions Carry marks as indicated

Each Question carries 10 marks

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|---|----|
| 1) Explain transient and secular equilibrium with examples. | 10 |
| 2) Quality Control tests of PET-CT System. | 10 |
| 3) Write about the principle of collimation and various Collimators used in Nuclear Medicine. | 10 |
| 4) Receiver Operating Characteristic Curve. | 10 |
| 5) Describe about various phantoms used in Nuclear Medicine. | 10 |
| 6) Half value layer | 10 |
| 7) Principle of GM counter & Importance of Quencher | 10 |
| 8) What is PACS facility, utility in present day health care scenario. | 10 |
| 9) Filters in Camera Systems – utility and importance. | 10 |
| 10) ICRP recommendations of 2007. | 10 |

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Name of Course : M.D.(Nuclear Med.) Paper No./Section 2
 Max.Marks: 100 Time Allowed: 3 hours Month/Year of Exam : MAY,2010

- 1) All questions are compulsory.
- 2) Marks as indicated against each question.


Each Question carries 10 marks

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| 1. Discuss about quality control of PET radiopharmaceuticals | 10 |
| 2. Deterministic effects of radiation. | 10 |
| 3. Write about radiation protection procedures to be adopted in high dose iodine therapy ward. | 10 |
| 4. What are the current concept about biological effects of low level radiation exposure? | 10. |
| 5. Write briefly about various radioisotope generators. | 10 |
| 6. Write in detail about decay scheme of $^{131}_{53}\text{I}$ | 10 |
| 7. Factor affecting localization of radiopharmaceuticals-significance. | 10 |
| 8. Personal Monitoring | 10 |
| 9. Radioactive waste disposal & its implementation. | 10 |
| 10. Short Note (1) ALARA (2) Transport index | 5 x 2 = 10 |

ALL INDIA INSTITUTE OF MEDICAL SCIENCES

Name of Course: M.D. (Nuclear Med.) Paper No./Section 4
Max.Marks: 100 Time Allowed : 3 hours Month/Year of Exam : MAY, 2010

1. All Questions are compulsory.
 2. Marks as shown against each question.
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| 1. Current concepts and practices in the management of differentiated thyroid cancer. | 10 |
| 2. Present status of neuroreceptor imaging by nuclear medicine and its clinical applications. | 20 |
| 3. Write about metabolic imaging of myocardium. | 10 |
|  4. Renal perfusion evaluation with PET-CT. | 10 |
| 5. Role of PET-CT in evaluation of carcinoma of unknown primary. | 10 |
| 6. Present status of Radioimmunotherapy. | 10 |
| 7. PET-MR reality or A dream | 10 |
| 8. Co-registration technique. | 10 |
| 9. PET Imaging in Dementia. | 10 |
| 10. Nuclear Medicine in Drug Development. | 10 |