

[LB 0212]

AUGUST 2012

Sub. Code: 2113

B.Sc. NUCLEAR MEDICINE TECHNOLOGY

SECOND YEAR

PAPER III – NUCLEAR MEDICINE TECHNIQUES AND

SPECIAL PROCEDURES

Q.P. Code : 802113

Time : Three hours

Maximum : 100 marks

(180 Mins) Answer ALL questions in the same order.

I. Elaborate on:

Pages Time Marks  
(Max.)(Max.)(Max.)

- |  |   |    |    |
|--|---|----|----|
| 1. Indications for high dose radioiodine therapy. Describe the procedure and precautions followed during high dose radioiodine therapy? Are there any special instructions for the patients after the therapy? | 7 | 20 | 10 |
| 2. Preparation of a patient for Meckels scintigraphy? Name the isotopes and explain the procedure in detail.   | 7 | 20 | 10 |
| 3. Indications, patient preparation and procedure of <sup>131</sup> Iodine Meta Iodo Benzyl Guanidine scintigraphy.  | 7 | 20 | 10 |

II. Write notes on:

- |  |   |    |   |
|--|---|----|---|
| 1. Indications for thyroid scintigraphy.                       | 4 | 10 | 5 |
| 2. Functions of hormones.                                      | 4 | 10 | 5 |
| 3. Antigen –antibody reaction.                                 | 4 | 10 | 5 |
| 4. What you would do when a patient has a seizure.             | 4 | 10 | 5 |
| 5. Protein loss study. Briefly explain the labeling procedure. | 4 | 10 | 5 |
| 6. Acquisition parameters for a dynamic renal study.           | 4 | 10 | 5 |
| 7. Emergency trolley and medications to be maintained.         | 4 | 10 | 5 |
| 8. Pharmacological stress.                                     | 4 | 10 | 5 |

III. Short answers on:

- |  |   |   |   |
|--|---|---|---|
| 1. Location and function of gall bladder.                                      | 2 | 4 | 3 |
| 2. When you would start the acquisition for a hepatic perfusion study and why? | 2 | 4 | 3 |
| 3. When you would ideally start the acquisition for a renal perfusion study.   | 2 | 4 | 3 |
| 4. Functions of lungs.   | 2 | 4 | 3 |
| 5. Enzyme-linked immunosorbent assay.  | 2 | 4 | 3 |
| 6. Multigated acquisition. Where is it used?                                   | 2 | 4 | 3 |
| 7. Glomerular filtration rate and Effective renal plasma flow.                 | 2 | 4 | 3 |
| 8. Physiology of uptake in skeletal scintigraphy.                              | 2 | 4 | 3 |
| 9. Application of Isotopes in tumor imaging.                                   | 2 | 4 | 3 |
| 10. Radiopharmaceuticals/isotopes used in imaging infection/inflammation.      | 2 | 4 | 3 |

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