

[LB 0212]

AUGUST 2012

Sub. Code: 2102

B.Sc. NUCLEAR MEDICINE TECHNOLOGY

FIRST YEAR

PAPER II – IMAGE PROCESSING TECHNIQUES

Q.P. Code : 802102

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. The various methods of storage and processing of digital images in nuclear medicine. | 7 | 20 | 10 |
| 2. The different output devices used in computers in nuclear medicine. | 7 | 20 | 10 |
| 3. The parameters related to optimum viewing of nuclear medicine images. | 7 | 20 | 10 |

II. Write notes on:

- | | | | |
|---|---|----|---|
| 1. Analog to digital converters. | 4 | 10 | 5 |
| 2. Pixel. | 4 | 10 | 5 |
| 3. Operating system. | 4 | 10 | 5 |
| 4. Flat panel monitors. | 4 | 10 | 5 |
| 5. Contrast enhancement. | 4 | 10 | 5 |
| 6. Image resolution. | 4 | 10 | 5 |
| 7. Day light film processing. | 4 | 10 | 5 |
| 8. Radioactive markers used in imaging. | 4 | 10 | 5 |

III. Short answers on:

- | | | | |
|---|---|---|---|
| 1. Data base. | 2 | 4 | 3 |
| 2. Hardware. | 2 | 4 | 3 |
| 3. Optical disc. | 2 | 4 | 3 |
| 4. Random access memory (RAM). | 2 | 4 | 3 |
| 5. Bytes. | 2 | 4 | 3 |
| 6. Window levels in image display. | 2 | 4 | 3 |
| 7. Colour scale. | 2 | 4 | 3 |
| 8. Hounsfield units. | 2 | 4 | 3 |
| 9. Teleradiology. | 2 | 4 | 3 |
| 10. Digital Imaging and Communications in Medicine (DICOM). | 2 | 4 | 3 |
