

B.Sc. NUCLEAR MEDICINE TECHNOLOGY

FIRST YEAR

PAPER II – IMAGE PROCESSING TECHNIQUES

Q.P. Code: 802102

Time: Three Hours

Maximum : 100 Marks

Answer All Questions

I. Elaborate on:

(3 x 10 = 30)

1. Draw the typical layout of a dark room and explain the role of wet and dry bench in film processing.
2. Describe the various input and output devices of a nuclear medicine computer.
3. Explain the advantage and disadvantage of digital imaging.

II. Write Notes on:

(8 x 5 = 40)

1. Upper and lower threshold.
2. Different matrix size used for image acquisition.
3. Pixel and Voxel.
4. Define Binary numeral system. Convert Binary number 1101 to decimal.
5. Flat panel monitors.
6. Computer input devices.
7. Digital to Analogue converter.
8. Automatic film processor.

III. Short Answers on:

(10 x 3 = 30)

1. Irregular region of interest.
2. Time activity curve.
3. Dynamic acquisition.
4. Byte mode acquisition.
5. Read Only Memory (ROM).
6. Composition of a fixer.
7. Fogging of photographic or X-ray film.
8. Point spread function.
9. PASC.
10. DICOM images.
