

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. $(2 \times 8 = 16)$

- Q.23 Explain the principle of Computed Tomography and explain its various system components.
- Q.24 What is gamma camera? Explain its working in detail.
- Q.25 Explain any two interactions of X rays with matter in detail.

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4th Sem / Medical Electronics

Subject : Medical Imaging Techniques

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory $(6 \times 1 = 6)$

- Q.1 X ray tube is a system component of
a) MRI b) Ventilator
c) CT d) Blood Cell Counter
- Q.2 Sound waves are used for diagnostic purpose in
a) MRI b) USB
c) CT d) Blood Cell Counter
- Q.3 Which one is not a diagnostic equipment
a) Multi para monitor b) MRI
c) CT d) USG

- Q.4 Which out of these are used in mammography
- a) Sound Waves b) Magnetic radiation
 - c) Gamma radiation d) X rays

- Q.5 Doppler effect is used in
- a) Ventilator b) Blood Cell Counter
 - c) X ray d) USG

- Q.6 The full form of CT is _____.
- a) Computed Tomography
 - b) Ultra Sonography
 - c) Multi para monitor
 - d) Magnetic Resonance Imaging

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 Write one use of mammography.
- Q.8 Write the full form of MIT.
- Q.9 Write one advantage of rotating anode type X ray tube.
- Q.10 Write name of one system component of USG.

- Q.11 Write example of electromagnetic radiation.
- Q.12 Write the frequency of sound waves used in USG.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Draw well labelled block diagram of Xray machine.
- Q.14 Write a short note on the 2nd generation CT scan.
- Q.15 Explain A scan of USG in a short note.
- Q.16 Write a short note on the super conductive magnet.
- Q.17 Explain the working of image intensifier in a short note.
- Q.18 Draw a well labelled block diagram of CT.
- Q.19 Write a short note on the transducer used in the USG.
- Q.20 Write a short note on the function of mammography.
- Q.21 Explain the principle of MRI in a short note.
- Q.22 Write four properties of X rays.