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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 (6x1=6)

Q.1 Collimator is an important part of

a) Multi para monitor b) X ray

c) Blood cell counter d) Auto analyser

Q.2 Select the medical imaging equipment

a) MRI b) Auto Analyzer

c) Patient Monitor d) Ventilator

Q.3 Rotating anode type x ray tube is used in

a) CT b) Ventilator

c) MRI d) USG

Q.4 Which one of these is not radioactive

a) Uranium b) Wood

c) Thorium d) Radium

Q.5 Rontgen discovered

a) MRI b) Ventilator

c) X ray d) USG

Q.6 NMR Coil is a system component of

a) USG b) X ray

c) Ventilator d) MRI

SECTION-B

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

Q.7 Write one use of gamma camera.

Q.8 Write one safety requirement for X ray.

Q.9 The frequency waves in USG is_____.

Q.10 Write full form of FID.

Q.11 Name one component of X ray.

Q.12 Write one difference between stationary anode and rotating anode type X ray tube.

SECTION-C

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

Q.13 Explain the doppler effect in a short note.

Q.14 Write a short note on permanent magnet MRI.

Q.15 Explain the working of image intensifier in a short note.

Q.16 Explain generation of X rays in a short note.

Q.17 Explain the 1st generation of CT scanner.

Q.18 Write a short note on gamma camera.

Q.19 Short note on Larmer frequency.

Q.20 Explain the angiography procedure in a short note.

Q.21 What is CT dose? Explain in a short note.

Q.22 Write a short note on B mode of USG

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain conventional X ray machine with its basic components.

Q.24 Write working principle of CT and explain its system components.

Q.25 Draw the block diagram of USG and explain its various components.