

Section-D

Note: Long answer Questions. Attempt any two Questions out of three Questions. $(2 \times 10 = 20)$

- Q.36 Explain any one nuclear medicine equipment in detail.
- Q.37 Write the working principle of CT and explain its types.
- Q.38 Explain in detail
- a) Digital X rays
 - b) Mobile X rays

B)

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6th Sem / Medical Electronics

Subject : Radiology & Imaging (RI)

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note : Multiple choice questions. All questions are compulsory. $(10 \times 1 = 10)$

- Q.1 Select the type of equipment MRI is
- a) Diagnostic
 - b) Surgical
 - c) Therapeutic
 - d) None
- Q.2 Which one is not a diagnostic equipment
- a) MRI
 - b) X-Ray
 - c) Ventilator
 - d) USB
- Q.3 Stationary type X ray tube is used in
- a) MRI
 - b) X-Ray
 - c) USG
 - d) Ventilator
- Q.4 Color Doppler is used in
- a) MRI
 - b) X-ray
 - c) USG
 - d) Gamma Camera
- Q.5 Select the imaging equipment
- a) X-ray
 - b) USG
 - c) MRI
 - d) AII
- Q.6 Gantry is a part of
- a) X ray
 - b) CT

- c) MRI d) USG
- Q.7 Rotating anode type X ray tube is used in
a) Defibrillator b) Ventilator
c) CT d) USG
- Q.8 Select the wavelength of X rays.
a) 1 mm to 700nm b) 400 nm to 1 nm
c) 1 nm to 0.001 nm d) 0.1 m to 1 mm
- Q.9 Which is not an electromagnetic ray
a) X-ray b) Gamma rays
c) Infrared rays d) β -rays
- Q.10 Which one of these is not radioactive
a) Uranium b) Wood
c) Thorium d) Radium

Section-B

Note: Objective types Questions. All Questions are compulsory. (10x1=10)

- Q.11 _____ is the full form of NMR.
- Q.12 Write one use of CT.
- Q.13 Write one part of X ray.
- Q.14 USG is used for _____.
- Q.15 Write one use of MRI.
- Q.16 Write name of one component of gamma camera.
- Q.17 Write name of one radioactive particle.
- Q.18 The wavelength of X ray is _____.

- Q.19 Name one diagnostic equipment.
- Q.20 Expand CT.

Section-C

- Note:** Short answer type Questions. Attempt any twelve Questions out of fifteen Questions. (12x5=60)
- Q.21 Write a short note on the Doppler effect.
- Q.22 Explain general purpose Xray machine in a short note.
- Q.23 Explain the superconductive MRI in a short note.
- Q.24 Write five properties of X-rays.
- Q.25 Explain the principle of operation of digital radiographic system.
- Q.26 Draw the block diagram of gemma camera.
- Q.27 Write a short note on the maintenance of X ray machine.
- Q.28 Write short note on A mode of scanning in USG.
- Q.29 Explain the 1st generation of CT scanner.
- Q.30 Write five system components of MRI.
- Q.31 Write a short note on transducer used in USG.
- Q.32 Draw the labelled block diagram of X ray machine.
- Q.33 Draw the block diagram of CT.
- Q.34 Explain the working principle of MRI.
- Q.35 Draw the block diagram of digital radiography system.