

- Q.26 A short note on the NMR.
- Q.27 Explain the need of beam collimator in X-Ray.
- Q.28 Explain the working principle of MRI in a short note.
- Q.29 Write five properties of USG.
- Q.30 Explain any one transducer used in ultrasound imaging.
- Q.31 Write a short note on CT Dose.
- Q.32 Write a short note one type of magnet used in MRI.
- Q.33 Write short note on radioactive particles.
- Q.34 Draw a neat and labelled block diagram of MRI.
- Q.35 Write five components of CT.

#### SECTION-D

**Note :** Long Answer type question. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Generation and detection of ultrasonic waves.
- Q.37 Explain the various generations of CT in detail.
- Q.38 a) Write short note on X ray generators.  
b) Write five properties of X-rays.

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**5th Sem / Medical Electronics**  
**Subject : Medical Imaging Techniques (MIT)**

Time : 3 Hrs.

M.M. : 100

#### SECTION-A

**Note :** Multiple choice questions. All questions are compulsory. (10x1=10)

- Q.1 Which of these are electromagnetic waves.  
a) Radio waves      b) Visible light  
c) Gamma rays      d) All of these
- Q.2 Which radiation is harmful for human.  
a) X rays      b) Magnetic Rays  
c) Ultrasonic Rays      d) Infrared Rays
- Q.3 Rontgen discovered  
a) MRI      b) Ventilator  
c) X ray      d) USG
- Q.4 NMR Coil is a system component of  
a) USG      b) X ray  
c) Ventilator      d) MRI
- Q.5 'A scan mode is used in

- a) Ventilator      b) USG  
c) Gamma Camera    d) MRI
- Q.6 CT generate three-dimensional (3-D) images of internal body structures using complex X-ray and computer aided tomographic imaging techniques.  
a) True                b) False
- Q.7 USG uses  
a) Magnetic effect    b) Doppler effect  
c) Photo Effect        d) None
- Q.8 “CT” stands for \_\_\_\_\_?  
a) Ultrasonography  
b) Magnetic resonance imaging  
c) Computed tomography  
d) None of the above
- Q.9 FID stands for Free Induction Decay  
a) Yes                b) No
- Q.10 What does “MRI” stand for  
a) Magneto-Ray Idometry  
b) Medical Radiometry Instrument  
c) Magnetic Resonance Imaging  
d) Maximal Radiology Imaging

## SECTION-B

- Note :** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Name one component of Gamma Camera.  
Q.12 Write full form of NMR.  
Q.13 The frequency of USG is \_\_\_\_\_.  
Q.14 Write one example of transducer.  
Q.15 Write one example of radioactive particle.  
Q.16 Write one use of X-ray.  
Q.17 Write one component of X-Rays.  
Q.18 Write one use of a gamma camera.  
Q.19 Write one mode of scanning in USG.  
Q.20 Write one safety requirement for X-Ray

## SECTION-C

- Note :** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Draw the labelled block diagram of X-Ray.  
Q.22 Write five uses of MRI.  
Q.23 Write short note on B mode of USG.  
Q.24 Write short note on line focus principle.  
Q.25 A short note on linear transducer on USG.