Q.21 Write a note on working principle of thermographic equipment.

Q.22 Write a note on PET imaging.

SECTION-D

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

Q.23 Explain DSA in details with block diagram.

Q.24 What is EBT? Explain it with block diagram.

Q.25 What do you mean by Gamma camera? Explain it with black diagram description.

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4th Sem./ Medical Electronics

Subject : Advance Medical Imaging Techniques

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 KeV stands for

a) Kilo electron volt b) Kilo energy volt

c) Kinetic electron volt d) Kinetic energy volt

Q.2 The inner layer of X-Ray tube is usually made up of.

a) Aluminum b) Asbestos

c) Copper d) Lead

Q.3 X-ray beam quality depend upon

a) Accelerating voltage

b) Inherent Radiation

c) Target Material

d) All of above

Q.4 The main advantage of spiral CT is

a) Sub second imaging time

b) Large volume imaging

c) Removal of ring artefacts

d) None

Q.5 The gamma camera head contain all below elements excepts-

a) Crystal

b) Photomultiplier Tube

c) Collimator

d) Pulse Height analyzer

Q.6 Which of the following imaging involves use of ionizing radiation.

a) Computed Tomography

b) Doppler imaging

c) Thermal imaging

d) Ultrasonography

SECTION-B

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

Q.7 Reflectivity

Q.8 Absorption

Q.9 Expand DRS

Q.10 Expand NMR

Q.11 Expand PET

Q.12 Infrared Radiation

SECTION-C

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

Q.13 Explain principle of Digital Radiography.

Q.14 Explain Angiography in details.

Q.15 Write a note on photomultiplier tube detectors.

Q.16 Explain spiral CT scanning.

Q.17 Explain radioactive emission.

Q.18 Write a note on physical factors affecting infrared emission from body.

Q.19 Write a note on Radiation protection.

Q.20 Explain the principle of radiation dosimetry.