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مقدمة في الاشعة والتصوير الطبي-الأو-لاالاشعة-كلية الطب والعلوم الصحية-درجة الامتحان(70)

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1) PACS (…..)
   1) - Digital Imaging and Communications in Medicine
   2) + Picture Archiving and Communication System
   3) - Picture digital radiography
   4) - Detectors or Picture coupled devices
2) Accelerating potential (10 - 25 MV) for ……
   1) - Mammography
   2) - Fluoroscopy
   3) + X Ray therapy
   4) - Computed Tomography (CT scan)
3) Wihch Anode (Target) made of a material Rhodium?
   1) + Mammography
   2) - X Ray therapy
   3) - Computed Tomography (CT scan)
   4) - DENTAL X RAY
4) What is the average photon energy for CTscan ?
   1) + KV 60
   2) - MeV 3 - 10 MeV
   3) - KV 150 - 9 MeV
   4) - 80 - 160 KV
5) Fluoroscopy refers to the continuous acquisition of a sequence of ……... images over time, essentially a real-time x-ray movie of the patient
   1) - MRI
   2) + X RAY
   3) - Ultrasound (US)
   4) - Computed Tomography (CT scan)
6) ……..... are produced by passing x-rays through the body, at a large number of angles, by rotating the x-ray tube around the body. One or more linear detector arrays, opposite the x-ray source, collect the transmission projection data.
   1) - Panoramic Dental X-rays
   2) + CT images
   3) - MRI scanners
   4) - Nuclear medicine images
7) The……..detector system is more sensitive to the presence of radioisotopes than SPECT cameras, and thus can detect very subtle pathologies
   1) + PET
   2) - CT scan
   3) - MRI
   4) - Ultrasound (US)
8) Positron are positively charged ……..., and are emitted by some radioactive isotopes such as fluorine 18 and oxygen 15.
   1) - proton
   2) - Gamma
   3) - alpha
   4) + electron

9) Because ultrasound is…....harmful than ionizing radiation to a growing fetus, ultrasound imaging is preferred in obstetric patients.
1) - few
2) - more
3) + less
4) - higher

10) Both the speed and direction of blood flow can be measured using imaging technology ….....
1) - CT scan
2) + Doppler Ultrasound Imaging
3) - SPECT
4) - Magneto EncephaloGraphy

11) The nuclear medicine modality, Single Photon Emission Computed Tomography…..... uses emission of gamma rays resulting from the interaction of radiopharmaceutical substance with the target tissue.
1) - PET
2) - Magneto EncephaloGraphy
3) - MRI
4) + SPECT

12) Understanding Image medium : tissue…..... is a static property that causes attenuation of an external radiation beam in X-ray imaging modality.
1) - resolution
2) - emission
3) + density
4) - intensity

13) ..... is related primarily to the proton density and to relaxation phenomena.
1) - resolution CT scan
2) - Emission Computed Tomography) SPECT)
3) - Contrast in ultrasound
4) + Contrast in MRI

14) In ultrasound imaging, the wavelength of sound is the fundamental limit of….....
1) + spatial resolution
2) - Contrast
3) - density
4) - intensity

15) Much…..... x-ray energies are used in mammography than any other radiographic applications.
1) - higher
2) - more
3) - equivalent
4) + lower

16) During a…..... examination, the x-ray tube rotates in a semicircle around the patient's head, starting at one side of the jaw and ending at the other side.
1) - Computed Tomography (CT scan)
2) + panoramic x-ray
3) - Mammography
4) - DENTAL X RAY

17) .....is useful for monitoring blood flow through arteries.
1) - Ultrasound Imaging (US)
2) + MR angiography (MRI)
3) - Single Photon Emission Computed Tomography (SPECT)

4) - Positron Emission Tomography (PET)

18) In ..... a nuclear camera records x- or gamma-ray emissions from the patient from a series of different angles around the patient.
1) - PET
2) - CT scan
3) - MRI
4) + SPECT

19) The ..... (e+)combines with an electron (e-) from the surrounding tissue, and the mass of both the e+ and the e- is converted by annihilation into pure energy, following Einstein's famous equation E = mc2.
1) + positron
2) - neutrons
3) - alpha
4) - beta

20) PACS consists of the following …..
1) - Digital acquisition (Picture)
2) - Display workstations
3) - " Storage devices (Archiving)"
4) + All above

21) ……..It is an imaginary line that divides the body into front and back.
1) - Axial
2) - Sagittal
3) + Coronal
4) - Lateral

22) The patient is in an inclined position 45 degrees from the x-ray receiver.
1) - Lateral side
2) + Oblique
3) - Anteroposterior PA
4) - Anteroposterior AP

23) 12 g of radioactive material in a place, and after 60 days, it was found that the remaining amount of this radioactive material is 0,75 g. Calculate the half-life of this radioactive substance.
1) - 12.5 days
2) - days 7.5
3) - days 30
4) + 15 days

24) A sample of radioactive material weighing 200 g.
How many of them are left after half an hour if
you know that the half-life is ten minutes.
1) - g100
2) - g50
3) + g25
4) - g12

25) It is an acronym for Source-Image Distance, which is the distance between the x-ray tube source and the Bucky beam receiver.
1) - SID usually 6 m
2) + SID usually 100 cm
3) - SID usually 10 cm
4) - SID usually 100 mm

26) RPO It is an acronym for
1) - Left Anterior Oblique

2) - Right Anterior Oblique
3) + Right Posterior Oblique
4) - Left Posterior Oblique

27) The inclination is of two types: either upward towards the head and is called …….,or it is tilted down towards the feet and here it iscalled …… .
1) - RPO - RAO
2) - .caudal - cephalad
3) - LAO - LPO
4) + cephalad - caudal.

28) ….....It is an imaginary line that divides the body into right and left .
1) - Lateral
2) - Axial
3) + Sagittal
4) - Coronal

29) An imaginary line that divides the human body into above and below.
1) + Axial
2) - Sagittal
3) - Coronal
4) - Lateral

30) The duration of the..... imaging machine is 30 - 45 minutes
1) + MRI
2) - X RAY
3) - Ultrasound (US)
4) - Computed Tomography (CT scan)

31) In MRI, the patient is placed in the magnetic field, and a pulse of …. waves is generated by antennas ("coils") positioned around the patient.
1) - sound
2) - microwaves
3) + radio
4) - seismic

32) Ultrasound refers to sound with a frequency above ……..
1) + 20,000Hz
2) - 2000Hz
3) - 200Hz
4) - 20Hz

33) Very sensitvive metabolic tool. It is advantage for……..
1) - MRI
2) + Nuclear medicine
3) - Ultrasound (US)
4) - Computed Tomography (CT scan)

34) Mainly anatomical and only "reasonable " spatial resolution. These disadvantages for……
1) - MRI
2) - Nuclear medicine
3) + Ultrasound (US)
4) - Computed Tomography (CT scan)

35) …..... is a specialized x-ray projection imaging technique useful for detecting breast anomalies such as masses and calcifications.
1) - DENTAL X RAY
2) + Mammography

3) - Computed Tomography (CT scan)
4) - panoramic x-ray