Radiographic positioning 2

1. All are landmarks for skull x-ray except:
   a- Outer canthus of the eye.       b- Infra orbital margin.
   c- Nasion.                        d- Internal auditory meatus.

2. All are parts of temporal bone except:
   a- Squamous part.                 b- Mastoid.
   c- Pterygoid bone.               d- Petrous bone.

3. One of these statements is true about skull sutures:
   a- There are two lambdoid, two coronal and one sagittal suture
   b- There are two sagittal, two lambdoid and two coronal.
   c- There are one lambdoid, two sagittal and two coronal.
   d- There are one coronal, two lambdoid and two sagittal.

4. All are paranasal sinuses except:
   a- Frontal sinuses.               b- Maxillary sinuses.
   c- Sigmoid sinuses.               d- Sphenoid sinuses.

5. These are all salivary gland, except:
   a- Parotid gland.                 b- Lacrimal gland.
   c- Submandibular gland.          d- Sublingual gland.

6. All the followings are skull views except:
   a- Tawn’s view.                   b- Lateral view.
   c- Submentovertical.             d- Flexion view.

7. One of these foramen cannot be seen in submentovertical view:
   a- Lacerum foramen.               b- Lacerum foramen.
   c- Spinusum foramen.             d- Ovale foramen.

8. All the following are planes for skull x-ray except:
   a- Median sagittal plane.         b- Oblique plane.
   c- Coronal plane.                d- Axial plane.

9. Centering point of the lateral skull view is: (one is true)
   a- Midway of canthomeatal line.
   b- Midway of glabella and external occipital protuberance.
   c- 1 cm above the orbitomeatal line and 2.5 cm anterior to the external auditory meatus.
   d- 2.5 cm above midway of canthomeatal line.

10. Usually we use occipital frontal view of skull because: (one is true)
   a- More effective.                b- More easy.
   c- To protect the eye lens.       d- Decrease movement.
11. Centering point for facial bones (lateral view) is: (one is true)
   a- 2, 5 cm inferior to outer canthus of eye.
   b- 2, 5 anterior to outer canthus of eye.
   c- 2, 5 superior to outer canthus of eye.
   d- 2, 5 cm posterior to outer canthus of eye.

12. Views for paranasal sinuses are all of the following except:
   a- Lateral view.
   b- Occipito mental view.
   c- Occipito frontal 15 degree caudad.
   d- Submentovertical view.

13. The number of deciduous teeth are: (one is true)
   a- 22 teeth.
   b- 20 teeth.
   c- 24 teeth.
   d- 32 teeth.

14. All the following are parts of larynx except:
   a- Vestibule.
   b- Pireform sinuses.
   c- Cricoid cartilage.
   d- Vocal cords.

15. Main ducts of respiration include all of the followings except:
   a- Bronchus.
   b- Alvioli.
   c- Trachea.
   d- Bronchioles.

16. Major vessels of the heart include all of the followings except:
   a- Aorta.
   b- Coronary arteries.
   c- Superior vena cava
   d- Inferior vena cava.

17. All the followings are alternative projections for P.A chest view, except:
   a- AP erect.
   b- oblique.
   c- AP supine.
   d- AP semi erect.

18. All the followings are thoracic inlet projections except:
   a- PA 30 degree caudad.
   b- AP 30 degree cephalad.
   c- AP 30 degree caudad.
   d- AP 15 coronal 15 degree and 15 degree cephalad.

19. All the followings are projections for sternum, except:
   a- P.A oblique.
   b- A.P oblique.
   c- Lateral.
   d- P.A with angled tube.

20. Lower ribs projections include all the followings except:
   a- P.A
   b- Rt P.A
   c- Lt P.A
   d- AP
Radiological cross-Sectional Anatomy

21. Regarding the anatomical position, all the following are true except:
   a- Person is standing erect       b- Arms by the sides
   c- Palms directed forward       d- Palms directed backward

22. Median sagittal plane is: all the following are true except:
   a- Vertical plane
   b- Passing through the center of the body
   c- Dividing the body into equal Rt and Lt halves
   d- Dividing the body into equal upper and lower parts

23. Coronal plane is: (one is true)
   a- Vertical plane
   b- Horizontal plane
   c- Dividing the body into equal upper and lower parts
   d- Is not useful in MRI

24. Anterior, used to indicate: (one is true)
   a- Back
   b- Front
   c- Upper
   d- Lower

25. All the following joints are synovial except:
   a- Knee joint
   b- Shoulder joint
   c- Symphysis pubis
   d- Wrist joint

26. Superior sternal notch lies at the level of: (one is true)
   a- D 3-4
   b- D 4-5
   c- D 5-6
   d- D 6-7

27. The trachea starts at the level of: (one is true)
   a- C 3
   b- C 4
   c- C 5
   d- C 6

28. Regarding dural structures, all the following are true except:
   a- Pia matter follows gyri
   b- Arachnoid membrane follows the gyri
   c- Dura matter is attached to the bony calvarium
   d- Pia matter is separated from the arachnoid membrane by CSF

29. All the following are located in the posterior mediastinum, except:
   a- The trachea
   b- The esophagus
   c- The descending aorta
   d- The phrenic nerve

30. All the following structures are in the midline of the brain, except:
   a- Pineal gland
   b- Occipital horns of the lateral ventricles
   c- 3rd ventricle
   d- Pineal gland calcification
31. The sacral vertebrae are: (one is true)
   a- 3 vertebrae  
   b- 4 vertebrae  
   c- 5 vertebrae  
   d- 6 vertebrae

32. Thoracic CT scan at the level of the aortic-pulmonary window shows all except:
   a- The origin and end of the aortic arch  
   b- SVC (superior veina cava)  
   c- The pulmonary trunk  
   d- The esophagus

33. All the following structures are normally seen in CT scans between the level of the central tendon and the esophageal opening of the diaphragm, except:
   a- Azygos vein  
   b- Fundus of the stomach  
   c- Adrenal gland  
   d- Posterior parts of the lung

34. CT scan of the abdomen between the levels of the superior and inferior poles of the kidneys, show all the following structures except:
   a- Origin of the SMA (superior mesenteric artery)  
   b- Body of the stomach  
   c- Splenic vein  
   d- Tail of the pancreas

35. Which parts of the upper GIT has the most anterior lie in the abdominal cavity: (one is true)
   a- Body of the stomach  
   b- Fundus of the stomach  
   c- Pylorus  
   d- Duodenal cap

36. Each of the following arteries is a branch of the celiac trunk except:
   a- The Rt. Gastric artery  
   b- The cystic artery  
   c- The common hepatic artery  
   d- The inferior pancreaticoduodenal artery

37. All the following bones are component of bony ring of the pelvis except:
   a- Lower lumbar spine  
   b- Innominate bones  
   c- Sacrum  
   d- Coccyx

38. Regarding the vertebral bodies of the cervical spine, all the followings are true except:
   a- Transverse diameter is equal to the AP  
   b- Transverse diameter is wider than the AP  
   c- Uncenate process taking part in the neurocentral joints  
   d- Are seven in number

39. The intravertebral foramina contain all the followings except:
   a- Nerve  
   b- Veins  
   c- Filum terminale  
   d- Fat
40. All the followings are parts of the stomach, except:
   a- Fundus   b- Duodenal cap
   c- Antrum   d- Lesser curvature

41. All the followings are essential part of Fluoroscope, except:
   a- X-ray tube   b- Fluoroscope tube
   c- C-arm   d- Transducer

42. Fluoroscopic X-ray tube operates at tube current equal to one of the followings:
   a- 100 mA   b- 1000 mA
   c- 500 mA   d- 5 mA

43. The minimum distance between the X-ray target and the tabletop is equal to one of the followings:
   a- 8 inch   b- 18 inch
   c- 28 inch   d- 38 inch

44. In image quality, the number of absorbed photons can be increased by one of the following ways:
   a- By increase the kvp of the photons
   b- By increase the number of the incident photons
   c- By capturing a lower percentage of incident photons
   d- By using conventional fluoroscopic screen

45. All the followings are advantages of spot film cameras for angiography except:
   a- Reduction in procedure time   b- Ease to perform
   c- Limited film coverage   d- Reduced patient exposure

46. All the followings are the components of television system except:
   a- Camera   b- Camera control unit
   c- Monitor   d- Cassette

47. The contrast of a television image can be affected by all of the followings except:
   a- Camera
   b- Monitor
   c- Brightness can be regulated with the monitor
   d- Contrast can not be regulated with the monitor

48. All the following methods can produce a thin slice of tissue except:
   a- Tomography   b- CT scan
   c- Laminography   d- Fluorography

49. Blurring in tomography can be increased by all of the followings except one:
   a- Increase the amplitude of tube travel
   b- Decrease the amplitude of tube travel
   c- Increase the distance from the focal plane
   d- Increase the distance from the film
50. All the followings are disadvantages of circular tomography except:
   a- Uniform section thickness     b- High cost
   c- Long exposure time            d- Sharp cut-off

51. The energy rage of an X-Ray tube used in mammography is: (one is true)
   a- 5 - 15 KeV                    b- 15 - 30 KeV
   c- 30 – 45 KeV                   d- 45 – 60 KeV

52. All the followings are disadvantages of stereoscopy except:
   a- Requires two films
   b- Costly
   c- Double the patient radiation exposure
   d- Superior for localization of foreign bodies

53. All the followings are true regarding depth perception, except:
   a- There are relative and depth perceptions
   b- Can measure the distance between objects
   c- Can distinguish the close object
   d- Can judge how far an object is

54. In stereoscopy, the magnitude of the tube is equal to one of the followings:
   a- 50% of target–film distance
   b- 30% of target–film distance
   c- 20% of target–film distance
   d- 10% of target–film distance

55. In stereoscopy, the direction of the tube shift should be: (one is true)
   a- Along the long axis of a grid
   b- Cross the long axis of a grid
   c- Should use high ratio grids
   d- Grid cut-off will not affect the image

56. In mammography we use one of the followings:
   a- Ultrasound wave
   b- Gamma ray
   c- X-ray
   d- Magnetic wave

57. Regarding the standard views in mammography, all the followings are true except one:
   a- Lateral oblique view
   b- Lateral view
   c- Craniocaudal view
   d- Should obtained with uniform breast compression
58. The best breast investigations in ladies below 30 years old is one of the followings:
   a- Ultrasound  b- Mammogram  c- CT scan  d- MRI

59. The best method to image the breast calcification is one of the followings:
   a- Breast ultrasound  b- Breast mammogram  c- Breast MRI  d- Bone isotope scan

60. The commonest anode material in mammography is:
   a- Tungsten  b- Molybdenum  c- Rhodium  d- Lead

Radiographic Equipment

61. All are true about the x-ray tube except one:
   a- Has cathode and anode.
   b- Has 2 filaments, 2 focal spot.
   c- Has one filament, 2 focal spot.
   d- Has one target.

62. All the followings are components of X-ray tube except one:
   a- Housing.
   b- Glass enclosure with helium.
   c- Filament.
   d- Anode.

63. Regarding rectification in generator; (one is false)
   a- Rectification means converting alternating current to direct current.
   b- Rectification means converting direct current to alternating current.
   c- Two rectifiers are needed.
   d- It protects the x-ray tube.

64. The primary circuit of x-ray machine contain all of the followings except one:
   a- Incoming current.
   b- Exposure switch.
   c- Auto transformer.
   d- Secondary set-up transformer.

65. Regarding tables of x-ray machine, all are true except one:
   a- Must be mobile.
   b- Mobility saving the time.
   c- Can be elevated to any level.
   d- Has electro magnetic brakes.

66. Types of tube support include all the followings except one:
   a- Ceiling mounted.
   b- Stand.
   c- Mobile.
   d- No tube support.

67. Regarding fluoroscopy machine; (one is false):
   a- The tube is over couch.
   b- The tube is under couch.
   c- The tube and table are mobile.
   d- T.V monitor is necessary.
68. Mobile unit is containing; (One is false):
   a- Wheeled base.                   b- Separated x-ray generator.
   c- Control panel.                 d- Supported x-ray tube.

69. Regarding battery-powered generators all are true except one:
   a- Provide regular charging procedures.
   b- The direct voltage converted to alternating.
   c- No rectification.
   d- Batteries are of nickel-cadmium.

70. The mammographic x-ray tube has these characteristics except one:
   a- Dual filament.                  b- Focal spot 0.1-0.3mm.
   c- Source to image distance 1m.    d- Feed bad circuits.

71. Good radiographic technique of mammogram depends on all the followings except one:
   a- Breast compression about 7cm width.
   b- Filtration.
   c- kVP 25-35.
   d- Exposure time < 2s.

72. Regarding panoramic film (one is true):
   a- More easy.                      b- More good quality film.
   c- Less cost.                      d- More effective for cosmetics.

73. Similarities between CR and film Radiography (one is true):
   a- Same x-ray tube and generator.
   b- Accurate positioning.
   c- Use cassata or image receptor.
   d- Use an intensifying screen/film.

74. The density of these tissues in CT scan. (one is false):
   a- Bone around 170 HU.            b- Fat< -20 HU.
   c- Fluid >30 HU.                  d- Gas< -100 HU.

75. The component of CT machine include:
   a- Fix gantry.                    b- Mobile table.
   c- Computer.                     d- Operator console.

76. The most radionuclide material in use are all the followings except one:
   a- 99 Tcm.                        b- 67 Ga.
   c- 59 Fe.                        d- 81 Kr.

77. All the followings are interaction between the sound and matter, except one:
   a- Reflection                     b- Attenuation
   c- Absorption                    d- Refraction.
78. The less common use of ultrasound is in:
   a- Abdominal.  
   b- Bone.  
   c- Pregnant.  
   d- Brain.

79. Regarding contra indication for MRI including all of the following except one:
   a- Pace maker.  
   b- Ferromagnetic implants.  
   c- Late pregnancy.  
   d- Claustrophobia.

80. Safety monitoring for patients in MRI include all of the followings, except one:
   a- T.V monitoring.  
   b- Blood pressure monitoring.  
   c- ECG monitoring.  
   d- Pacemakers.

<table>
<thead>
<tr>
<th>Radiobiology and radiation protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>81. Radiation protection shields are made up of:</td>
</tr>
</tbody>
</table>
| a- Copper  
| b- Silver  
| c- Lead  
| d- Tin  |
| 82. Which of the following is non ionizing: |
| a- Beta irradiation  
| b- Alpha irradiation  
| c- Gamma irradiation  
| d- Ultraviolet radiation  |
| 83. SI units of absorbed dose of radiation is: |
| a- Rad  
| b- Roentgen  
| c- Gray  
| d- Curie  |
| 84. In radiology department, the most commonly used protective for radiation protection is: |
| a- Steel  
| b- Lead  
| c- Copper  
| d- Aluminum  |
| 85. The most radiosensitive tissue is: |
| a- Brain tissue  
| b- Bone marrow  
| c- Bones  
| d- Liver  |
| 86. Maximum permissible dose for a year is: |
| a- 1 rad  
| b- 5 rad  
| c- 50 rad  
| d- 500 rad  |
| 87. Gamma radiation is protected by: |
| a- Lead  
| b- Gold  
| c- Copper  
| d- Aluminum  |
| 88. The biological effect of ionizing radiation is related to all, except one: |
| a- Dose  
| b- Ambient pressure  
| c- Type of radiation  
| d- Age of patient  |
89. Members of the public may be exposed to the following sources of ionization radiation, except one:
   a- X-ray
   b- Gamma rays
   c- Color television
   d- Infra red light

90. The biological effects of ionizing radiation (one is false):
   a- Depend on dose rate
   b- Depend upon the volume of tissue irradiated
   c- Are the same for all tissue
   d- Depend on the type of tissue irradiated

91. X-radiation dose to the patient is reduced by:
   a- Use of fast intensifying screen
   b- Decrease of exposure time, with proportional increase in tube current
   c- Reduction of focus-film distance
   d- Increase of primary beam filtration

92. The following are "principles of radiation", except one:
   a- Decrease exposure time
   b- Shielding
   c- Increase source distance
   d- High mAs

93. The most dangerous radiation is:
   a- X-ray
   b- Alpha ray
   c- Beta ray
   d- Gamma ray

94. The units used to measure radiation exposure is:
   a- Rad
   b- Rem
   c- Gray
   d- Roentgen

95. All the procedures help to reduce patient dose, except one:
   a- Cones
   b- Filters
   c- Fast screen
   d- Grids

96. The main advantage of radiography using intensifying screen is (one is true):
   a- A significant reduction of patient exposure
   b- A decrease in exposure latitude
   c- Radiographs with shorter scale of contrast
   d- An increase in patient exposure

97. The dose equivalent which measures the biological effect of radiation is equal to: (one is true)
   a- Absorbed dose divided by the quality factor
   b- Absorbed dose multiplied by quality factor
   c- Absorbed dose minus the quality factor
   d- Half the absorbed dose
98. **Regarding grid, all the following are true, except one:**
   a- Used to eliminate scattered radiation
   b- Can be replaced by an air-gap between patient and film
   c- An increase in exposure is needed when it is used
   d- Grid with large ratios are used to reduce exposure

99. **Most modern radiographic film base are composed of:**
   a- Silver nitrate
   b- Polyester
   c- Silver bromide
   d- Cellulose nitrate

100. **The least tissue penetration is seen with:**
    a- Alpha rays
    b- Beta rays
    c- Gamma rays
    d- X-rays

**The End**