

يتكون هذا الاختبار من (100) سؤال موضوعي من نوع الاختيار من متعدد، الإجابة عنها إجبارية. ظلل بقلم الرصاص بشكل غامق الدائرة التي تشير إلى الإجابة الصحيحة في المكان المخصص لذلك في نموذج الإجابة المرفق.

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 foramens can not be seen in submentovertical view:

- | | |
|----------------------|---------------------|
| a- Optic foramen . | b- Lacerum foramen. |
| c- Spinusum foramen. | d- Ovale foramen. |

8. All the following are planes for skull x -ray except:

- | | |
|---------------------------|-------------------|
| a- Median saggital 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

40. All the followings are parts of the stomach, except:

- a- Fundus
- b- Duodenal cap
- c- Antrum
- d- Lesser curvature

Principles of Exposure 2

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 range 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 magnification 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 be 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- Tungeston
- 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.

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