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Test Questions

(hint: print questions & mark answers before starting online test)

How to use the technical factors chart

1. _____ controls the penetration and quality of x-ray photons.
 - A. mA
 - B. Detectors
 - C. kVp
 - D. Focusing cup
2. Time always varies with body part thickness and respiration factor.
 - A. TRUE
 - B. FALSE
3. Which of the following should be considered while setting mA?
 - A. anode angle
 - B. shielding options
 - C. low kVp
 - D. small focal spot

Upper extremity

4. Digits can be immobilized by which of the following during positioning?
 - A. cotton swab or tape
 - B. shielding apron
 - C. by technologist
 - D. sand bags
5. In PA oblique position of a digit, the palm needs to be rotated at _____ angle towards IR.
 - A. 10
 - B. 15
 - C. 22
 - D. 45
6. The central ray for PA hand position is _____.
 - A. parallel to MCP joint of first digit
 - B. perpendicular to third MCP joint
 - C. parallel to PIP joint
 - D. perpendicular to midcarpal area
7. Which of the following are demonstrated in PA oblique hand position when hand is rotated laterally at 45-degree angle?
 - A. ulnar joint
 - B. elbow joint
 - C. interphalangeal joints
 - D. metatarsal joint
8. The central ray for lateral hand position is _____.
 - A. parallel to MCP joint of first digit
 - B. perpendicular to second MCP joint
 - C. parallel to PIP joint
 - D. perpendicular to midcarpal area
9. Flex elbow _____ degrees, with forearm and arm in contact with table during lateral wrist positioning.
 - A. 35
 - B. 45
 - C. 50
 - D. 90
10. The central ray for PA wrist ulnar deviation position is _____.
 - A. perpendicular to scaphoid
 - B. perpendicular to hamate
 - C. parallel to lunate
 - D. perpendicular to pisiform

11. During PA wrist axial stecher method, place one end of IR on a support and adjust so that finger end is elevated _____ degrees.
- A. 20
 - B. 30
 - C. 50
 - D. 90
12. Which of the following positioning method demonstrates carpal canal?
- A. Stecher
 - B. Grashey
 - C. Gaynor-Hart
 - D. Pearson
13. During AP forearm positioning, adjust rotation to place _____ equidistant from IR.
- A. interphalangeal joints
 - B. humeral epicondyles
 - C. vertebral column
 - D. scapular body
14. For lateral forearm positioning, flex elbow 45 degrees and adjust hand to lateral position (thumb down).
- A. TRUE
 - B. FALSE
15. In AP elbow positioning, the hand needs to be _____.
- A. pronated
 - B. obliques
 - C. bent
 - D. supinated
16. Which of the following positioning method uses transthoracic lateral projection for Proximal humerus/shoulder?
- A. Stecher
 - B. Grashey
 - C. Lawrence
 - D. Pearson
17. In AP shoulder positioning, center a point 1 inch inferior to _____ to IR.
- A. coracoid process
 - B. scapulohumeral joint
 - C. sternum
 - D. glenoid fossa
18. In Grashey method for shoulder joint, rotate body _____ degrees toward affected side.
- A. 10 to 15
 - B. 35 to 45
 - C. 50 to 66
 - D. 67 to 90
19. To demonstrate _____ separation, attach sandbags of equal weight (5-10 lb) to each wrist and also take a second radiograph without weights for comparison.
- A. scapulohumeral
 - B. interphalangeal
 - C. humeral epicondyles
 - D. acromioclavicular (AC)
20. For AP axial clavicle, the central ray is angled _____ degrees cephalad to midshaft of clavicle.
- A. 15 to 30
 - B. 35 to 45
 - C. 50 to 66
 - D. 67 to 90

Lower extremity

21. For AP or AP axial toes, the central ray is angled _____ degrees posteriorly to show joint spaces.
- A. 15
 - B. 35

- C. 40
- D. 45

22. Which of the following can be used during lateral positioning to separate toes?

- A. gauze or tape
- B. shielding apron
- C. step-wedge filter
- D. sand bag

23. The central ray for AP oblique foot (medial rotation) position is _____.

- A. Perpendicular to IP joint of great toe
- B. Perpendicular to MTP joint
- C. Perpendicular to base of third metatarsal
- D. perpendicular to midcarpal area

24. Which of the following is perpendicular to the table for lateral foot position?

- A. radius
- B. patella
- C. ulna
- D. humeral epicondyles

25. For axial calcaneus position, the central ray is angled 40 degrees cephalic entering _____ surface of the foot.

- A. dorsal
- B. plantar
- C. posterior
- D. superior

26. For mediolateral position, dorsiflex ankle at _____ degree angle.

- A. 35
- B. 45
- C. 50
- D. 90

27. Which of the following position shows mortise joint of an ankle?

- A. AP
- B. Lateral (mediolateral)
- C. AP oblique (medial rotation)
- D. AP stress studies

28. A _____ is recommended for increased stress during AP ankle stress studies.

- A. Lead glove
- B. Tape
- C. Step-wedge filter
- D. Sand bag

29. Which of the following are parallel to IR for an AP leg position?

- A. radius and ulna
- B. femoral condyles
- C. interphalangeal joints
- D. humeral epicondyles

30. Center knee to IR at level ½ inch below _____ for AP position.

- A. tibia
- B. patellar apex
- C. femur
- D. humeral epicondyles

31. For PA patella position, heel is typically rotated _____ degrees laterally.

- A. 5 to 10
- B. 20 to 25
- C. 30 to 40
- D. 45 to 55

32. Which of the following positioning method is used for axiolateral hip view?

- A. Stecher
- B. Grashey
- C. Danelius-Miller
- D. Pearson

Vertebral column

33. Which of the following position requires patient to phonate "ah" during exposure?

- A. AP c-spine
- B. Lateral chest
- C. AP oblique knee
- D. AP atlas and axis

34. Which of the following positioning method is used for dens AP view?

- A. Stecher
- B. Fuchs
- C. Danelius-Miller
- D. Pearson

35. Which of the following helps to lower the patient's shoulders during lateral c-spine positioning?

- A. having patient continue to breathe
- B. taping the shoulders
- C. using a grid
- D. attaching weights to patient's wrists

36. SID of _____ inches is recommended for lateral c-spine position.

- A. 35
- B. 45
- C. 72
- D. 90

37. For AP axial oblique views of c-spine, patient's body is rotated _____ degrees.

- A. 20
- B. 45
- C. 60
- D. 90

38. For trauma lateral c-spine, the radiographer needs to rotate or extend patient's neck for positioning.

- A. TRUE
- B. FALSE

39. The central ray enters at _____ for trauma AP axial oblique c-spine position.

- A. C4
- B. C6
- C. C7
- D. T1

40. The central is perpendicular to C7-T1 inter-space for _____ view.

- A. Trauma AP axial oblique
- B. PA axial oblique
- C. Lateral Swimmer's
- D. Flexion and extension lateral

41. If possible, position the patient so the lower thorax is at the _____ of the x-ray tube during AP view.

- A. anode end
- B. rotator end
- C. target end
- D. cathode end

42. During an AP positioning of L-spine, doing which of the following places patient's back in firm contact with the table?

- A. having patient invert toes
- B. having patient flex knees and hips
- C. putting shielding on lumbar area
- D. using high ratio grid

43. _____ can be placed behind patient to absorb radiation during lateral L-spine positioning.
- A. Lead glove
 - B. Tape
 - C. Step-wedge filter
 - D. Sand bag
44. The central ray for AP axial sacrum is angled 15 degrees cephalic and enters 2in superior to _____.
- A. ASIS
 - B. pubic symphysis
 - C. hip joints
 - D. iliac crest

Chest

45. The chest x-rays are taken on _____.
- A. shallow breathing
 - B. suspended full inspiration
 - C. full expiration
 - D. none of the above
46. The central ray for lateral chest position enters patient at level of _____.
- A. C7
 - B. L1
 - C. clavicle
 - D. T7
47. What is the SID for AP chest view?
- A. 35 in
 - B. 45 in
 - C. 72 in
 - D. 90 in
48. Which of the following position is used to show pulmonary apices on x-ray?
- A. AP axial (lordotic)
 - B. AP oblique
 - C. PA oblique
 - D. Lateral
49. Which of the following position show fluid down and free-air/pneumothorax up on x-ray?
- A. AP axial (lordotic)
 - B. AP oblique
 - C. AP or PA (lateral decubitus)
 - D. Lateral (standing)
50. Suspended full inspiration is required to _____ during PA ribs positioning.
- A. show heart shadow
 - B. depress diaphragm
 - C. lift diaphragm
 - D. relax shoulders
51. Which of the following respiration shows ribs below diaphragm?
- A. shallow breathing
 - B. suspended full inspiration
 - C. suspended full expiration
 - D. regular breathing
52. Radiographer needs to rotate patient's body 45 degrees with affected side toward IR for AP oblique ribs positioning.
- A. TRUE
 - B. FALSE
53. For PA oblique sternum, radiographer needs to rotate patient's body _____ degrees to prevent superimposition of vertebral and sternal images.
- A. 5 to 10
 - B. 15 to 20
 - C. 30 to 40

D. 45 to 55

54. The top of the IR is placed 1.5 inches above _____ for lateral sternum positioning.

- A. 10th rib
- B. diaphragm
- C. T12
- D. jugular notch

Abdomen

55. Which of the following **must** be included on an abdomen x-ray?

- A. clavicle
- B. sternum
- C. pubic symphysis
- D. both knees

56. Center IR 2 inches above _____ to include diaphragm for AP upright abdomen.

- A. T1
- B. pubic symphysis
- C. hip joints
- D. iliac crests

57. The patient is in lateral recumbent position, **usually** left side down on the table for AP (lateral decubitus) abdomen positioning,

- A. TRUE
- B. FALSE

58. Which of the following contrast media is used for esophagus during x-ray imaging?

- A. Gadolinium
- B. Barium mixture
- C. Radionuclide
- D. Sonazoid

59. The top of the IR is placed at level of patient's _____ for lateral esophagus positioning.

- A. clavicle
- B. sternum notch
- C. mouth
- D. shoulders

60. _____ patients require the **greatest** rotation for PA oblique stomach and duodenum positioning.

- A. Hyposthenic
- B. Hypersthenic
- C. Pediatric
- D. Female

61. The central ray for AP oblique (LPO) stomach and duodenum is perpendicular to center of IR midway between vertebral column and left lateral border of abdomen at level of _____.

- A. L1-L2
- B. pubic symphysis
- C. hip joints
- D. iliac crest

62. For AP stomach and duodenum positioning, central ray is perpendicular to IR at level of _____.

- A. 5th rib
- B. diaphragm
- C. jugular notch
- D. pylorus

63. The average kVp used for AP or PA small intestine with contrast media for an adult is _____.

- A. 40
- B. 55
- C. 70
- D. 120

64. For large intestine PA position, the central ray is perpendicular to IR, entering level of _____.
A. T1
B. pubic symphysis
C. hip joints
D. iliac crests
65. Which of the following position shows rectosigmoid area on x-ray?
A. Lateral stomach and duodenum
B. PA oblique (RAO) stomach
C. PA axial large intestine
D. AP small intestine
66. For PA oblique views of large intestine, patient's body is rotated ____ degrees.
A. 10 to 15
B. 35 to 45
C. 50 to 66
D. 67 to 90
67. Which of the following is needs to be done for lateral large intestine positioning?
A. patient in lateral recumbent position
B. centering IR to ASIS
C. suspend patient respiration
D. all of the above
68. For AP axial large intestine position, the central ray is angled _____ degrees cephalic entering approximately 2 inches below level of ASIS.
A. 10 to 15
B. 30 to 40
C. 50 to 66
D. 67 to 90
69. Which of the following is needs to be done for AP/PA lateral decubitus large intestine positioning?
A. elevate patient's dependent side on firm pad
B. place patient's arms above head, with knees slightly flexed
C. suspend patient respiration
D. all of the above
70. The central ray for AP oblique views for urinary system is perpendicular to level of iliac crests, entering elevated side approximately ____ lateral to mid-line.
A. 1 inches
B. 2 inches
C. 4 inches
D. 6 inches
71. For AP/PA axial bladder voiding studies, the central ray enters at _____ with 10 to 15 degree angle.
A. ASIS
B. pubic symphysis
C. hip joints
D. iliac crest

Cranium

72. _____ plane divides the body in equal halves (right and left).
A. Coronal
B. Transverse
C. Midsagittal
D. Oblique
73. An angle of mandible is also called _____.
A. gonion
B. mental point
C. outer canthus
D. nasion

74. The Mentomeatal line runs between external acoustic meatus and _____.
A. gonion
B. mental point
C. outer canthus
D. nasion
75. _____ is perpendicular to IR for PA and PA axial cranium positioning.
A. Acanthomeatal line
B. Infraorbitomeatal line
C. Coronal line
D. Orbitomeatal line
76. For PA axial Caldwell method, angle the central ray 15 degrees caudad exiting _____.
A. glabella
B. mental point
C. acanthion
D. nasion
77. For lateral cranium view, the central ray enters perpendicularly 2 inches superior to _____.
A. acanthomeatal line
B. infraorbitomeatal line
C. external acoustic meatus
D. orbitomeatal line
78. In Towne method for cranium, the central ray is directed through _____ with caudal angle of 30 degrees to OML.
A. foramen magnum
B. temporal lobe
C. C4
D. nasion
79. In Haas method for cranium, patient's _____ need to lie in same transverse plane.
A. hips
B. shoulders
C. knees
D. wrists
80. In Schüller method for cranium, the central ray is directed through _____ perpendicular to IOML.
A. gonion
B. temporal lobe
C. sella turcica
D. T1
81. _____ line is perpendicular to IR in lateral facial bones.
A. Acanthomeatal line
B. External acoustic
C. Midsagittal
D. Interpupillary
82. In parietoacanthial positioning of facial bones, the central ray is angled _____ degrees to IR plate.
A. 37
B. 49
C. 55
D. 60
83. In Reverse water's method for facial bones, the central ray enters _____.
A. glabella
B. mental point
C. acanthion
D. nasion
84. In lateral positioning of a nasal bone, _____ plane is parallel to IR.
A. coronal
B. transverse
C. midsagittal

D. oblique

85. Which of the following view of zygomatic arches requires patient to hyperextend neck and rest head on vertex on IR?

- A. Lateral
- B. Submentovertical
- C. AP axial
- D. PA

86. In tangential projection of zygomatic arches, tilt top of patient's head approximately _____ degrees away from side being examined.

- A. 15
- B. 37
- C. 45
- D. 50

87. Which of the following projection requires patient to flex neck for zygomatic arches x-ray?

- A. Submentovertical
- B. Tangential
- C. Lateral
- D. AP axial

88. Which of the following part position is required for PA mandibular rami?

- A. Have patient rest forehead and nose on grid device
- B. Adjust head so that midsagittal plane is perpendicular to IR
- C. OML is perpendicular to IR
- D. all of the above

89. For lateral paranasal sinuses, the central ray is horizontal and perpendicular that enters ½ to 1 inch posterior to _____.

- A. glabella
- B. mental point
- C. outer canthus
- D. nasion

90. Which of the following projection is done to show maxillary sinuses?

- A. Lateral
- B. Parietoacanthial (Waters method)
- C. Submentovertical
- D. Caldwell method

Mobile radiography

91. Which of the following position is applied for critically ill or injured patient during mobile chest x-ray?

- A. supine
- B. sitting
- C. upright
- D. standing

92. The average kVp used for AP mobile chest without grid for an adult is _____.

- A. 40
- B. 50
- C. 65
- D. 90

93. In AP pelvis, rotate patient's _____ medially 15 degrees when not contraindicated.

- A. legs
- B. hips
- C. shoulders
- D. neck

94. Which of the following needs to be aligned with grid to prevent grid cutoff?

- A. step-wedge filter
- B. collimation
- C. central ray
- D. focusing cup

95. In lateral (dorsal decubitus) femur, grid is placed perpendicular to ____ plane.

- A. lumbosacral
- B. external acoustic
- C. epicondylar
- D. metatarsal

96. The radiographer **must not** remove cervical collar without consent of physician for c-spine x-ray.

- A. TRUE
- B. FALSE