RS Registry Review 2 Summer 2026

Multiple Choice
Identify the choice that best completes the statement or answers the question.

1. In which clinical situation is a long exposure time with low mA intentionally used as part of the breathing technique, and why?
   a. During skull radiography to increase contrast and reduce dose
   b. In chest imaging to capture the lung apices without motion
   c. For abdominal radiography to blur out motion from bowel peristalsis
   d. During lateral thoracic spine imaging to blur out ribs and lung markings
   e. In extremity imaging to better visualize cortical bone detail

2. What is a key advantage of variable kVp / fixed mAs charts?
   a. Simpler to use for inexperienced radiographers
   b. Lower patient dose in all cases
   c. Better suited for small body parts and pediatrics
   d. Requires no patient measurement
   e. Ensures consistent exposure index

3. Which factor has the greatest effect on size distortion (magnification)?
   a. Focal spot size
   b. kVp
   c. Image receptor speed
   d. Exposure time
   e. OID

4. What occurs when kilovoltage peak (kVp) is increased?(Select all that apply)
   1. Beam penetrability increases.
   2. Image contrast becomes higher (short-scale).
   3. The quantity and energy of x-ray photons increase.
   a. 1 and 2only
   b. 1 and 3 only
   c. 2 and 3 only
   d. 1,2, and 3

5. Which of the following are causes of shape distortion in radiographic imaging?
   1. Misalignment of the CR to the image receptor
   2. Angulation of the part being imaged
   3. Increased SID
   a. 1 and 2 only
   b. 1 and 3 only
   c. 2 and 3 only
   d. 1,2, and 3

6. Why are exposure technique charts important even when using digital imaging systems?(Select all that apply)
   1. They minimize exposure error
   2. They help achieve consistent image quality
   3. They eliminate the need for technologist judgment
   a. 1 and 2 only
   b. 1 and 3 only
   c. 2 and 3 only
   d. 1,2, and 3

7. A radiographic technique requires 25 mAs with an exposure time of 0.05 seconds. What mA setting should be used?
   a. 125 mA
   b. 250 mA
   c. 500 mA
   d. 625 mA

8. Why is a 72-inch SID preferred for chest radiography?

a. It reduces radiation dose
b. It reduces motion blu
c. It minimizes heart magnification
d. It improves penetration of dense structures
e. It increases contrast

9. To minimize geometric unsharpness in routine radiography, the radiographer should:
   a. Use the largest focal spot available
   b. Increase the OID when possible
   c. Decrease the SID slightly
   d. Use the smallest focal spot and minimize OID

10. In which of the following projections is the breathing technique most appropriately used?
    a. AP Upper Ribs
    b. AP Scapula
    c. Lateral Lumbar Spine
    d. AP Abdomen

11. Which of the following directly affects sharpness (recorded detail) of a radiographic image?
    a. kVp
    b. Motion
    c. mAs
    d. Grid ratio

12. Which of the following components is typically standardized in a technique chart?
    a. Body habitus
    b. Exposure index
    c. Type of imaging receptor
    d. Image post-processing parameters
    e. Viewbox brightness

13. Which change will minimize shape distortion on a radiograph?
    a. Use a shorter SID
    b. Angle the CR more
    c. Increase the OID
    d. Align the CR perpendicular to the part and IR
    e. Use a small focal spot

14. Which of the following types of motion is considered involuntary and outside the patient's control?
    a. Breathing during chest X-ray
    b. Talking during skull radiograph
    c. Muscle tremors in Parkinson's disease
    d. Moving arm during an extremity study
    e. Failure to hold still after instruction

15. When formulating a technique chart, which of the following must be calibrated or standardized?
    1. X-ray tube and generator (callibration)
    2. Processing system or digital reader (CR)
    3. SID
    a. 1 only
    b. 2 only
    c. 1 and 2 only
    d. 1 and 3 only
    e. 1,2, and 3

16. Why must radiographic equipment be calibrated before technique chart development?
    a. To align the collimator light
    b. To ensure patient comfort
    c. To ensure accurate exposure output
    d. To balance image receptor speed
    e. To standardize cassette sizes

17. In digital radiography, insufficient mAs primarily results in:
    a. Loss of spatial resolution
    b. Quantum mottle and low signal-to-noise ratio (SNR)

c. Increased geometric unsharpness
d. Increased contrast

18. What is the greatest contributor to geometric unsharpness in radiography?
    a. mA
    b. SID
    c. OID
    d. SOD

19. You are using a 300 mA setting and need to deliver 24 mAs. What should the exposure time be?
    a. 0.04 seconds
    b. 0.06 seconds
    c. 80 ms
    d. 12 ms
    e. 0.18 seconds

20. Which of the following pairs of anatomical structures generally require similar exposure techniques (kVp and mAs) on a technique chart?
    a. Chest and abdomen
    b. Hand and pelvis
    c. Shoulder and knee
    d. Skull and foot

21. Which technique chart method offers uniform radiographic contrast across varying patient sizes?
    a. Variable kVp / fixed mAs
    b. Fixed kVp / variable mAs
    c. AEC chart
    d. Automatic exposure modulation

22. In digital systems, what factor primarily impacts visibility of detail?
    a. FSS
    b. SID and OID
    c. WL and WW
    d. Grid alignment

23. Which of the following groups of patients are most at risk for motion unsharpness?
    a. Young adults with fractures
    b. Cooperative elderly patient
    c. Intoxicated or pediatric patients
    d. Athletic adolescents
    e. Outpatients having follow-up studies

24. What is the purpose of a wedge filter in digital radiography?
    a. Reduce motion blur
    b. Equalize exposure in uneven anatomy
    c. Enhance soft tissue visibility
    d. Filter scatter radiation

25. What is the optimal kVp value in a fixed kVp technique chart designed to ensure
    a. Lowest possible patient dose
    b. Maximum subject contras
    c. Adequate (enough) penetration with acceptable contrast
    d. Highest exposure index
    e. Shortest exposure time

26. Which of the following describes a key goal of modern digital technique chart design?
    a. Set the mAs as high as the system allows
    b. Eliminate the use of exposure indicators
    c. Ensure acceptable image quality with the lowest dose reasonably achievable
    d. Use high kVp to reduce image contrast

27. What is a common strategy for reducing motion blur without increasing patient dose significantly?
    a. Using slower image receptors
    b. Increasing OID to improve resolution
    c. Applying the 15% rule and reducing mAs
    d. Using a long exposure and low mA
    e. Increasing SID and using a low-ratio grid

28. How should exposure be modified for a wet plaster cast in digital radiography?
    a. Decrease mAs by 50%
    b. Increase mAs by 25%
    c. Double the mAs
    d. Triple the mAs

29. Why does a routine chest x-ray typically require a higher kVp (110–125) than an abdomen x-ray (70–85 kVp)?
    a. Chest tissues are denser
    b. To enhance bone contrast
    c. To better penetrate air-filled lungs and reduce contrast
    d. To improve spatial resolution

30. Which imaging parameter adjustment best reduces motion unsharpness in cooperative patients?
    a. Increase SID and decrease mA
    b. Decrease OID and increase grid ratio
    c. Increase exposure time and decrease focal spot size
    d. Use a higher mA and shorter exposure time
    e. Use the lowest kVp setting possible

31. According to the fixed kVp chart method, how should mAs be adjusted for every 4–5 cm increase in part thickness?
    a. Decreased by half
    b. Increased by 25%
    c. Doubled
    d. Kept constant
    e. Tripled

32. Why is it not advisable for a technologist to personally hold a patient during an exposure?
    a. It increases the chance of patient injury
    b. It violates ALARA principles unless absolutely necessary
    c. It decreases image contrast
    d. It increases geometric magnification

33. An increase in part thickness from 10 cm to 15 cm using a fixed kVp technique chart requires what adjustment to mAs?
    a. Reduce mAs by half
    b. Triple the mA
    c. Keep mAs the same
    d. Double the mAs

34. What is the main advantage of increasing mA and decreasing time while maintaining the same mAs?
    a. Increases image contrast
    b. Increases patient dose
    c. Reduces motion blur
    d. Enhances tissue differentiation
    e. Reduces scatter production

35. Why is a small focal spot preferred for imaging fingers or hands?
    a. To increase x-ray quantity
    b. To reduce patient dose
    c. To enhance spatial resolution
    d. To improve contrast

36. In which scenarios would applying the Reciprocity Law be most beneficial?(Select all that apply)
    1. To reduce patient motion using short exposure times.
    2.To minimize radiation dose by lowering kVp.
    3.To use a small focal, lower mA, and longer exposure time
    a. 1 and 2 only
    b. 1 and 3 only
    c. 2 and 3 only
    d. 1,2, and 3

37. Which of the following would NOT improve sharpness in digital imaging?
    a. Reducing OID
    b. Increasing SID
    c. Increasing mAs
    d. Eliminating motion

38. A radiographer uses a fixed kVp of 73 and 10 mAs for a knee that measures 10 cm. If another patient's knee measures 14 cm, what should the new mAs be?
    a. 15 mAs
    b. 20 mAs
    c. 30 mAs
    d. 5 mAs
    e. 2.5 mAs

39. Which of the following will help open joint spaces and minimize distortion during joint imaging?
    a. Increase OID
    b. Use a lower mA
    c. Align the CR parallel to the joint space
    d. Align the CR perpendicular to the joint space
    e. Increase the focal spot size

40. Which of the following best describes the primary purpose of adjusting mAs in radiographic technique?
    a. To control image contrast
    b. To increase beam penetrability
    c. To control the exposure to the image receptor
    d. To reduce scatter radiation
    e. To improve spatial resolution

41. What is the minimum requirement when creating a new technique chart for a radiographic room?
    a. Calibrating the collimator light
    b. Calibrating the x-ray generator
    c. Replacing the grid
    d. Installing an AEC backup timer

42. What is the main benefit of using a fixed kVp / variable mAs technique chart
    a. It reduces radiographic contrast variability (contrast is constant)
    b. It eliminates the need for patient measurements
    c. It maximizes the risk of tube overheating
    d. It simplifies image post-processing

43. Which of the following describes the primary purpose of a technique chart?
    a. To eliminate the need for AEC
    b. To automate exposure factor selection completely
    c. To ensure consistency and reduce patient exposure
    d. To allow technologists to bypass EI values
    e. To minimize use of the control pane

44. What is a common source of error when using a technique chart?
    a. Measuring SID instead of OID
    b. Choosing too low a focal spot
    c. Measuring part thickness incorrectly
    d. Using a grid on all tabletop exam

45. Which of the following are standardized in a radiographic technique chart?(Select all that apply)
    1. Grid ratio
    2. Type of image receptor (CR, DR, or Analog)
    3. Anatomic pathology
    a. 1 and 2 only
    b. 1 and 3 only
    c. 2 and 3 only
    d. 1,2, and 3

46. A technologist is imaging a hypersthenic patient. What general adjustment to exposure technique is recommended?
    a. Decrease mAs and increase SID
    c. Use low kVp and short exposure time

b. Increase kVp and possibly mAs
d. Increase SID and lower the grid ratio

47. Which of the following will help minimize size distortion (magnification) in a radiograph?
1. Increase SID
2. Decrease OID
3. Use a small focal spot
a. 1 and 2 only
b. 1 and 3 only
c. 2 and 3 only
d. 1,2, and 3

48. The most detrimental factor to maximum recorded detail is:
a. increased OID.
b. decreased SID.
c. large focal spot size.
d. motion.

49. The misrepresentation of the size of an object is:
a. shape distortion.
b. magnification.
c. foreshortening.
d. elongation.

50. In order to image a structure that is located anteriorly in the body, it is best radiographed to minimize magnification by doing a _____ projection.
a. posterior-anterior
b. anterior-posterior
c. lateral
d. oblique

51. Magnification is affected by:
a. AEC.
b. OID.
c. SID.
d. b and c

52. Providing clear instructions to the patient is a primary method for reducing unsharpness due to:
a. shape distortion.
b. motion.
c. geometric properties.
d. size distortion.

53. The smallest detail that can be detected in an image refers to:
a. contrast resolution.
b. spatial resolution.
c. geometric unsharpness.
d. distortion.

54. The ability of the system to differentiate between two small objects that have similar subject contrast refers to:
a. contrast resolution.
b. spatial resolution.

c. geometric unsharpness.
d. distortion.

55. A good reason for sometimes selecting the highest available mA station to obtain a given amount of mAs is to
    a. keep the exposure time as short as possible.
    b. use the small focal spot.
    c. prevent excessive anode heat.
    d. accommodate breathing technique.

56. A good reason for selecting a low mA station to obtain a given amount of mAs is to
    a. reduce motion blur.
    b. use the small focal spot.
    c. obtain optimum kilovoltage.
    d. maintain the SID at 40 inches.

57. A decrease in exposure technique would be required if a patient had
    a. cardiomegaly.
    b. degenerative arthritis.
    c. pleural effusion.
    d. rheumatoid arthritis.

58. Which of the following projections of a body part would benefit from the use of a compensating filter?
    a. AP C-spine
    b. AP knee
    c. AP humerus
    d. AP thoracic spine

59. Unequal magnification of different portions of the same object is termed
    a. resolution.
    b. distortion.
    c. unsharpness.
    d. fog.

60. Another name for size distortion is
    a. enlargement.
    b. magnification.
    c. minification.
    d. flux gain.

61. A change from the small focal spot to the large focal spot results in
    a. decreased resolution.
    b. magnification.
    c. distortion.
    d. increased contrast.

62. With a large OID, the reduction of excessive magnification is accomplished by
    a. increasing the SID.
    b. increasing the kVp.

c. decreasing the SID.
d. decreasing the kVp.

63. An increase in OID will result in
    a. increased magnification.
    b. increased image sharpness.
    c. loss of contrast.
    d. increased radiographic density.

64. Motion of the patient, the tube, or the IR during the exposure results in decreased
    a. contrast.
    b. distortion.
    c. radiographic density.
    d. resolution.

65. The principal means of controlling involuntary motion is to
    a. decrease in SID.
    b. decrease in exposure time (seconds).
    c. increase in exposure time (seconds).
    d. increase in OID.

66. Quantum mottle or graininess in the radiographic image because of too few photons interacting with the body part will affect image quality by decreasing the
    a. density.
    b. spatial resolution.
    c. contrast.
    d. latitude.

67. Which of the following will increase spatial resolution?
    1. Increase in SID
    2. Increase in OID
    3. Decrease in focal spot size
    a. 1 and 2 only
    b. 1 and 3 only
    c. 2 and 3 only
    d. 1, 2, and 3

68. What is the first step to reduce patient motion?
    a. Use a technique with a low mA and a long exposure time.
    b. Use high kVp techniques.
    c. Use detailed IR systems.
    d. Communicate with the patient about the procedure and what the patient needs to do to help.

69. What is the effect of magnification on spatial resolution?
    a. Magnification has no effect on resolution.
    b. Magnification increases resolution.
    c. Magnification decreases resolution.
    d. The effect of magnification on resolution is variable according to kVp and IR

speed.

70. Which quality factor is a key to visibility of detail?
    a. SID
    b. Focal spot size
    c. Density
    d. Contrast

71. The geometric factors that affect the formation of the image are
    1. SID.
    2. OID.
    3. focal spot.
    a. 1 and 2
    b. 1 and 3
    c. 2 and 3
    d. 1, 2, and 3

72. Which of the following would be considered involuntary motion by the patient?
    1. Tremors
    2. Peristalsis
    3. Breathing
    a. 1 and 2
    b. 1 and 3
    c. 2 and 3
    d. 1, 2, and 3

73. Using a higher SID
    a. increases magnification
    b. decreases magnification
    c. increases size distortion
    d. none of the above

74. _____ SID is typically used to image the chest so that the heart is seen with minimal magnification.
    a. 30 inches
    b. 40 inches
    c. 72 inches
    d. 90 inches

75. When OID cannot be reduced, it is possible to reduce size distortion by
    a. increasing mAs
    b. increasing SID
    c. using a small focal spot size
    d. decreasing SID

76. The only factor that affects exposure to the image receptor, size distortion, and image contrast is
    a. SID
    b. mAs
    c. focal spot size
    d. OID

77. Focal spot size is determined by
    a. the amount of kVp
    b. cathode filament size
    c. cathode focusing cup size
    d. all of the above

78. Focal spot size affects only
    a. density
    b. contrast
    c. sharpness
    d. noise

79. Whenever magnification is increased
    a. spatial resolution is decreased
    b. spatial resolution is increased
    c. spatial resolution stays the same
    d. exposure to the image receptor increases

80. The controlling factors for magnification are:
    a. density and contrast.
    b. object-to-image receptor distance (OID) and source-to-image receptor distance (SID).
    c. central ray angle and central ray alignment.
    d. part/image receptor alignment and SID.

81. Voluntary motion resulting from lack of control can be caused by:
    1. fear.
    2. age (child).
    3. tremors.
    a. 1 and 2
    b. 1 and 3
    c. 2 and 3
    d. 1, 2, and 3

82. Radiographers can control voluntary motion by:
    a. using a high kVp.
    b. increasing the length of exposure time.
    c. performing the examination in the recumbent position.
    d. giving clear instruction to the patient.

83. A decrease in technical factors may be required for a patient who has:
    a. edema.
    b. emphysema.
    c. atelectasis.
    d. advanced carcinoma.

84. An increase in technical factors may be required to penetrate a part on a patient who has:
    a. atrophy.

b. emphysema.
c. pleural effusion.
d. degenerative arthritis.

85. Collimation of the x-ray beam prompts which of the following?
    1. An increase in radiographic contrast
    2. Reduction of scatter and secondary radiation
    3. Reduction in radiation to the patient
    a. 1 and 2
    b. 1 and 3
    c. 2 and 3
    d. 1, 2, and 3

86. The best way to minimize magnification is to use a _____.
    a. long SID
    b. small OID
    c. large OID
    d. both A and B

87. Focal spot blur can be reduced by using _____.
    a. a small focal spot
    b. a shorter SID
    c. a larger OID
    d. all of the above

88. Radiographic image quality is improved when the _____ is increased.
    a. source image distance
    b. focal spot size
    c. film speed
    d. screen speed

89. Patient thickness affects image quality by affecting _____.
    a. magnification
    b. radiographic contrast
    c. focal spot blur
    d. all of the above

90. The technologist primarily controls radiographic contrast by varying the _____.
    a. image receptor
    b. kilovoltage
    c. voltage ripple
    d. milliamperage

91. The term PSP technology commonly refers to
    a. direct digital imaging.
    b. indirect DR imaging.
    c. photon static production technology.
    d. computed radiography (CR).

92. Due to increased potential grid cutoff, which would be the most challenging grid to use?

a. Focused linear grid
b. Parallel linear grid
c. Cross-hatched grid
d. Reciprocrating grid

93. The type of electrical current that exists between the secondary side of the high tension transformer and the rectifiers in a 3-phase radiographic unit is a type of:
a. High voltage direct current
b. Low voltage direct current
c. High voltage alternating current
d. Low voltage alternating current

94. Which type of radiographic unit is normally associated with the highest radiation output?
a. A fixed installation rectified full-wave unit
b. A fixed installation rectified three-phase unit
c. A capacitor discharge mobile unit
d. A high frequency fixed installation unit

95. The most common reason for the limited life expectancy of a rotating type x-ray is:
a. Cracking of the tube envelope
b. A short in the induction motor transformer
c. The excessive expansion of the focal spot
d. The burnout of the filament

96. The principal factor that is used to increase the amount of current passing through the filament of the x-ray tube is:
a. A higher mA setting
b. A longer timer setting
c. A shorter source-to-image receptor distance
d. The use of a multi-phase generator

97.

Figure 2

The reason that necessitates repeating the radiograph shown in Figure 2 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)
d. Foreign object superimposed over anatomy
e. Image is diagnostically acceptable; repeat is not necessary

98.

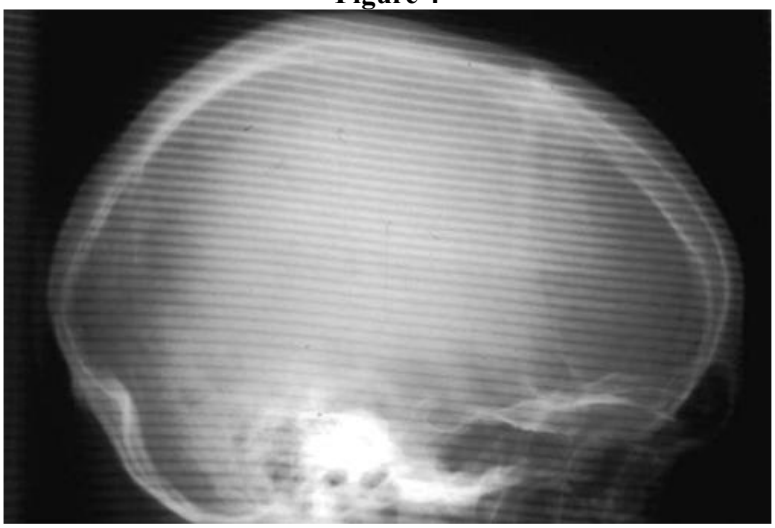
Figure 5

The reason that necessitates repeating the radiograph shown in Figure 5 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)
d. Foreign object superimposed over anatomy
e. Image is diagnostically acceptable; repeat is not necessary

99.

Figure 4



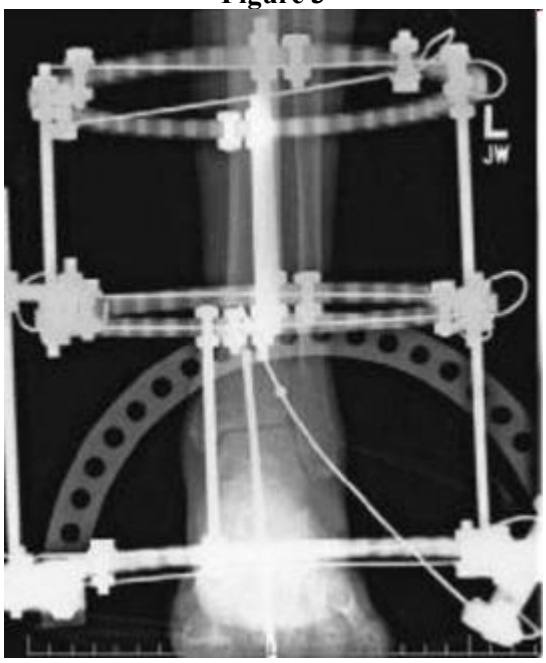
The reason that necessitates repeating the radiograph shown in Figure 4 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)

d. Foreign object superimposed over anatomy
e. Grid error

100.

Figure 3



The reason that necessitates repeating the radiograph shown in Figure 3 is

a. Presence of visible bacscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)
d. Foreign object superimposed over anatomy
e. Image is diagnostically acceptable; repeat is not necessary

101.

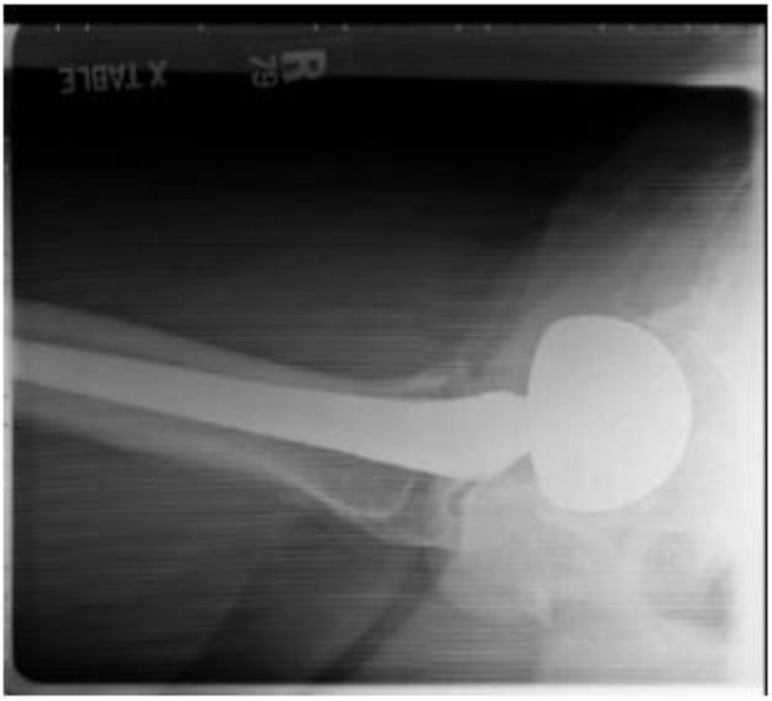
Figure 1

The reason that necessitates repeating the radiograph shown in Figure 1 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)
d. Foreign object superimposed over anatomy
e. Image is diagnostically acceptable; repeat is not necessary

102.

Figure 44



The reason that necessitates repeating the radiograph shown in Figure 44 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)
d. Foreign object superimposed over anatomy
e. Grid error

103.

Figure 444

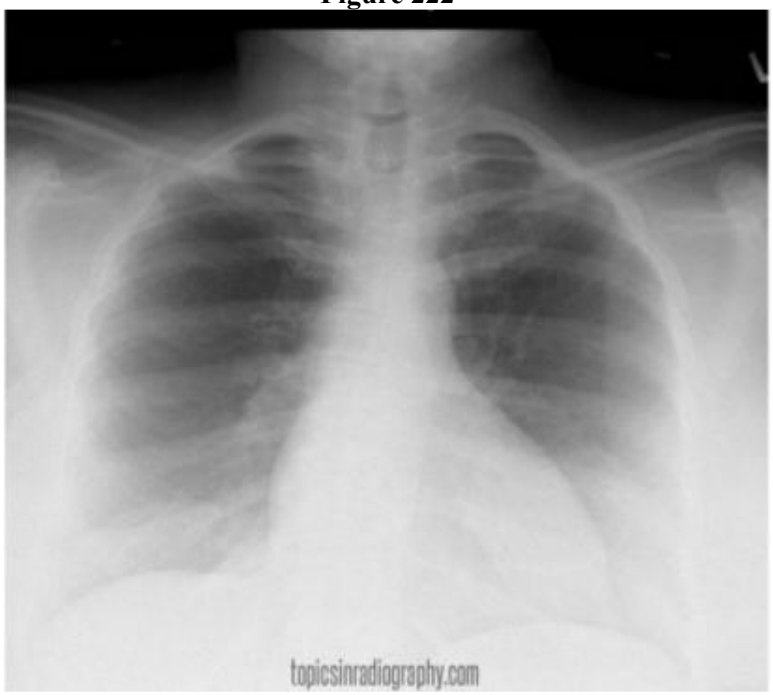
The reason that necessitates repeating the radiograph shown in Figure 444 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)

d. Foreign object superimposed over anatomy
e. Grid error

104.

Figure 222

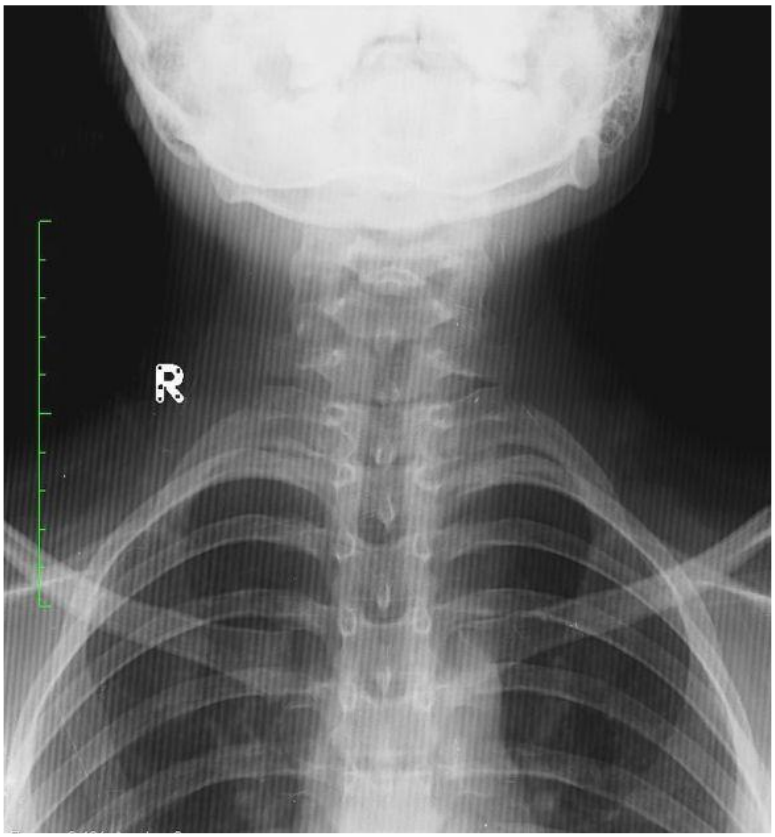


The reason that necessitates repeating the radiograph shown in Figure 222 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)
d. Foreign object superimposed over anatomy
e. Grid error

105.

Figure 111



The reason that necessitates repeating the radiograph shown in Figure 111 is

a. Presence of visible backscatter across the image
b. Motion artifact that compromises diagnostic quality
c. Incorrect exposure field (collimation)
d. Foreign object superimposed over anatomy
e. Grid error

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Answer Section

MULTIPLE CHOICE

1. ANS: D PTS: 1
2. ANS: C PTS: 1
3. ANS: E PTS: 1
4. ANS: B PTS: 1
5. ANS: A PTS: 1
6. ANS: A PTS: 1
7. ANS: C PTS: 1
8. ANS: C PTS: 1
9. ANS: D PTS: 1
10. ANS: B PTS: 1
11. ANS: B PTS: 1
12. ANS: C PTS: 1
13. ANS: D PTS: 1
14. ANS: C PTS: 1
15. ANS: E PTS: 1
16. ANS: C PTS: 1
17. ANS: B PTS: 1
18. ANS: C PTS: 1
19. ANS: C PTS: 1
20. ANS: C PTS: 1
21. ANS: B PTS: 1
22. ANS: C PTS: 1
23. ANS: C PTS: 1
24. ANS: B PTS: 1
25. ANS: C PTS: 1
26. ANS: C PTS: 1
27. ANS: C PTS: 1
28. ANS: D PTS: 1
29. ANS: C PTS: 1
30. ANS: D PTS: 1
31. ANS: C PTS: 1
32. ANS: B PTS: 1
33. ANS: D PTS: 1
34. ANS: C PTS: 1
35. ANS: C PTS: 1
36. ANS: B PTS: 1
37. ANS: C PTS: 1
38. ANS: B PTS: 1
39. ANS: C PTS: 1
40. ANS: C PTS: 1
41. ANS: B PTS: 1

42. ANS: A PTS: 1
43. ANS: C PTS: 1
44. ANS: C PTS: 1
45. ANS: A PTS: 1
46. ANS: B PTS: 1
47. ANS: A PTS: 1
48. ANS: D
Motion of the tube, part, or image receptor has the most detrimental effect on the recorded detail of the radiographic image.

PTS: 1
49. ANS: B
One aspect of distortion is magnification, or size distortion.

PTS: 1
50. ANS: A
The posterior-anterior (PA) projection will put the anterior surface of the body closest to the image receptor, reducing OID and magnification.

PTS: 1
51. ANS: D
Both the OID and SID affect magnification, although OID has the greatest effect.

PTS: 1
52. ANS: B
Along with short exposure times and immobilization techniques, clear patient instructions can help to reduce or eliminate patient motion.

PTS: 1
53. ANS: B
Spatial resolution refers to the smallest structure that can be visualized in an image.

PTS: 1
54. ANS: A
Different from spatial resolution, contrast resolution is the system's ability to image structures that are very similar in terms of subject contrast.

PTS: 1
55. ANS: A PTS: 1
56. ANS: B PTS: 1
57. ANS: B PTS: 1
58. ANS: D PTS: 1
59. ANS: B PTS: 1
60. ANS: B PTS: 1
61. ANS: A PTS: 1
62. ANS: A PTS: 1
63. ANS: A PTS: 1
64. ANS: D PTS: 1

65. ANS: B PTS: 1
66. ANS: B PTS: 1
67. ANS: B PTS: 1
68. ANS: D PTS: 1
69. ANS: C PTS: 1
70. ANS: D PTS: 1
71. ANS: D PTS: 1
72. ANS: A PTS: 1
73. ANS: B
Using a higher SID decreases magnification (size distortion).

PTS: 1 REF: 126 OBJ: 9
74. ANS: C
An SID of 72 inches is typically used with chest imaging to reduce magnification. An SID of 90 inches would further reduce magnification, but it is not a standard SID.

PTS: 1 REF: 127 OBJ: 9
75. ANS: B
An increase in SID can, to some extent, compensate for an increase in OID.

PTS: 1 REF: 128 OBJ: 11
76. ANS: D
OID is the only factor that affects exposure to the image receptor, size distortion, and image contrast.

PTS: 1 REF: 127 OBJ: 11
77. ANS: B
The size of the focal spot depends on the size of the cathode filament selected to be energized.

PTS: 1 REF: 124 OBJ: 9
78. ANS: C
Focal spot size affects only sharpness (recorded detail).

PTS: 1 REF: 125 OBJ: 9
79. ANS: A
Increased magnification results in decreased spatial resolution.

PTS: 1 REF: 127 OBJ: 11
80. ANS: B PTS: 1 DIF: Level: Medium
REF: Volume 1, Page 7 OBJ: Category: General
TOP: Exam: None
81. ANS: A PTS: 1 DIF: Level: Hard REF: Volume 1, Page 19
OBJ: Category: Positioning TOP: Exam: 2
82. ANS: D PTS: 1 DIF: Level: Medium
REF: Volume 1, Page 19 OBJ: Category: Positioning
TOP: Exam: 1
83. ANS: B PTS: 1 DIF: Level: Medium
REF: Volume 1, Page 41 OBJ: Category: Positioning
TOP: Exam: 1

84. ANS: C PTS: 1 DIF: Level: Hard REF: Volume 1, Page 41
OBJ: Category: Positioning TOP: Exam: 2
85. ANS: D PTS: 1 DIF: Level: Medium
REF: Volume 1, Page 32 OBJ: Category: Positioning
TOP: Exam: 1
86. ANS: D
The best way to minimize magnification is to use a long SID and small OID.

PTS: 1 DIF: Moderate REF: page 175
OBJ: Distinguish the geometric factors affecting image quality.
87. ANS: A
Focal spot blur can be reduced by using a small focal spot, longer SID, and smaller OID.

PTS: 1 DIF: Moderate REF: page 178
OBJ: Distinguish the geometric factors affecting image quality.
88. ANS: A
Radiographic image quality is improved when source image distance is increased.

PTS: 1 DIF: Moderate REF: page 175
OBJ: Understand the relationship between image quality and SID.
89. ANS: D
Patient thickness affects image quality by affecting magnification, radiographic contrast, focal spot blur, motion blur, absorption blur, and optical density.

PTS: 1 DIF: Moderate REF: page 179
OBJ: Analyze the subject factors affecting image quality.
90. ANS: B
The technologist primarily controls radiographic contrast by varying the kilovoltage.

PTS: 1 DIF: Moderate REF: page 183
OBJ: Examine the tools and techniques available to create high quality images.
91. ANS: D
Cassette-based systems use a screen-film combination or a photostimulable storage phosphor (PSP) screen in a light-tight cassette. Referred to as computed radiography (CR), the technology of PSP plates affords an economical transition toward digital imaging technology.

PTS: 1 REF: p. 96
92. ANS: C
The cross-hatched grid is most difficult to use because it does not allow for any angulation of the x-ray beam.

PTS: 1 OBJ: 9
93. ANS: C PTS: 1
94. ANS: D PTS: 1
95. ANS: D PTS: 1
96. ANS: A PTS: 1
97. ANS: B PTS: 1
98. ANS: D PTS: 1
99. ANS: E PTS: 1
100. ANS: E PTS: 1

101. ANS: A PTS: 1
102. ANS: E PTS: 1
103. ANS: E PTS: 1
104. ANS: E PTS: 1
105. ANS: E PTS: 1