

MULTIPLE CHOICE

1. The primary controlling factor of radiographic contrast in screen-film radiography is:
- mA.
 - time.
 - kVp.
 - SID.

ANS: C DIF: Level: Medium REF: Volume 1, Page 5
OBJ: Category: General TOP: Exam: 1

2. The ability to visualize very small structures on a medical image is termed:
- contrast.
 - density.
 - distortion.
 - spatial resolution.

ANS: D DIF: Level: Hard REF: Volume 1, Page 5
OBJ: Category: General TOP: Exam: 2

3. Radiographic images of the hands, wrist, feet, and toes are routinely displayed with the digits:
- positioned toward the ceiling.
 - positioned toward the floor.
 - horizontal and pointed to the left.
 - horizontal and pointed to the right.

ANS: A DIF: Level: Medium REF: Volume 1, Page 11
OBJ: Category: General TOP: Exam: 1

4. The total destruction of microorganisms is accomplished through the use of:
- disinfectants.
 - sterilization.
 - germicides.
 - antiseptics.

ANS: B DIF: Level: Hard REF: Volume 1, Page 16
OBJ: Category: General TOP: Exam: 1

5. In screen-film radiography, which term is defined as *the degree of blackening*?
- Optical density
 - Contrast
 - Recorded detail
 - Distortion

ANS: A DIF: Level: Medium REF: Volume 1, Page 5
OBJ: Category: General TOP: Exam: None

6. The equivalent term for optical density in digital imaging is:
- contrast.
 - noise.
 - brightness.
 - window level.

ANS: C DIF: Level: Medium REF: Volume 1, Page 5
OBJ: Category: General TOP: Exam: None

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

ANS: B DIF: Level: Medium REF: Volume 1, Page 7
OBJ: Category: General TOP: Exam: None

8. Involuntary motion can be caused by which of the following?
- Peristalsis
 - Spasm
 - Breathing
- 1 and 2
 - 1 and 3
 - 2 and 3
 - 1, 2, and 3

ANS: A DIF: Level: Medium REF: Volume 1, Page 18
OBJ: Category: Positioning TOP: Exam: None

9. 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

ANS: A DIF: Level: Hard REF: Volume 1, Page 19
OBJ: Category: Positioning TOP: Exam: 2

10. 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.

ANS: D DIF: Level: Medium REF: Volume 1, Page 19
OBJ: Category: Positioning TOP: Exam: 1

11. A decrease in technical factors may be required for a patient who has:

- a. edema.
- b. emphysema.
- c. atelectasis.
- d. advanced carcinoma.

ANS: B DIF: Level: Medium REF: Volume 1, Page 41
OBJ: Category: Positioning TOP: Exam: 1

12. 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.

ANS: C DIF: Level: Hard REF: Volume 1, Page 41
OBJ: Category: Positioning TOP: Exam: 2

13. Information that must be included on all radiographic images includes all of the following *except*:

- a. right or left side marker.
- b. patient's name or ID number.
- c. radiographer's name.
- d. date of exam.

ANS: C DIF: Level: Medium REF: Volume 1, Page 25
OBJ: Category: Positioning TOP: Exam: 1

14. The metric conversion of 40 inches is _____ cm.

- a. 16
- b. 18
- c. 90
- d. 102

ANS: D DIF: Level: Medium REF: Volume 1, Page 30
OBJ: Category: General TOP: Exam: None

15. The source of radiation in an x-ray tube (the anode) shall not be closer than _____ inches from the _____.

- a. 12; patient
- b. 15; patient
- c. 12; tabletop
- d. 15; tabletop

ANS: A DIF: Level: Hard REF: Volume 1, Page 31
OBJ: Category: General TOP: Exam: 2

16. 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

ANS: D DIF: Level: Medium REF: Volume 1, Page 32
OBJ: Category: Positioning TOP: Exam: 1

17. Federal guidelines require gonad shielding for which of the following situations?

1. The gonads lie in the primary beam.
 2. The clinical objective of the exam is not compromised.
 3. The patient has reasonable reproductive potential.
- a. 1 and 2
 - b. 1 and 3
 - c. 2 and 3
 - d. 1, 2, and 3

ANS: D DIF: Level: Medium REF: Volume 1, Page 33
OBJ: Category: Positioning TOP: Exam: 1

18. Which of the following devices are considered IRs?

1. Television monitor
 2. Computed radiography image plate
 3. Cassette with film
- a. 1 and 2
 - b. 1 and 3
 - c. 2 and 3
 - d. 1, 2, and 3

ANS: C DIF: Level: Medium REF: Volume 1, Page 3
OBJ: Category: General TOP: Exam: 3

19. Spatial resolution is primarily controlled by:

1. mA.
 2. screens.
 3. focal spot size.
- a. 1 and 2
 - b. 1 and 3
 - c. 2 and 3
 - d. 1, 2, and 3

ANS: C DIF: Level: Hard REF: Volume 1, Page 5
OBJ: Category: General TOP: Exam: 3

20. If a bone is projected longer or shorter than it actually is on the radiographic image, it is known as:

- a. angulation.
- b. distortion.
- c. geometry.
- d. anatomic position.

ANS: B DIF: Level: Hard REF: Volume 1, Page 7
OBJ: Category: General TOP: Exam: 3

21. Which of the following must be cleaned after every patient?

- a. Collimator
- b. Tabletop
- c. Gonad shields
- d. X-ray tube

ANS: B DIF: Level: Medium REF: Volume 1, Page 14
OBJ: Category: General TOP: Exam: 3

22. Which of the following is true when using computed radiography?

1. The IR could be opened for a few minutes without causing the stored image to be destroyed.
 2. Collimation of the x-ray beam is not critical.
 3. Final contrast and density adjustments of the radiographic image are done using a computer.
- a. 1 and 2
 - b. 1 and 3
 - c. 2 and 3
 - d. 1, 2, and 3

ANS: B DIF: Level: Hard REF: Volume 1, Page 33 | Volume 1, Page 36
OBJ: Category: General TOP: Exam: 3

23. The phosphors in computed radiography IRs are very sensitive to:

- a. kVp.
- b. dust.
- c. collimation.
- d. scatter radiation.

ANS: D DIF: Level: Medium REF: Volume 1, Page 38
OBJ: Category: General TOP: Exam: 3

24. Radiographers who are educated as “radiologist extenders” are known as:

1. physician assistants (PAs).
 2. radiologist assistants (RAs).
 3. radiology practitioner assistants (RPAs).
- a. 1 and 2
 - b. 2 and 3
 - c. 2 and 3
 - d. 1, 2, and 3

ANS: C DIF: Level: Medium REF: Volume 1, Page 14
OBJ: Category: General TOP: Exam: 2

25. Blood and body fluid recommendations are issued by the:

- a. CDC.
- b. ASRT.
- c. ARRT.
- d. JCAHO.

ANS: A DIF: Level: Medium REF: Volume 1, Page 16
OBJ: Category: General TOP: Exam: 1

26. Each radiology department must write age-specific competencies to meet the standards of the:

- a. CDC.
- b. ASRT.
- c. ARRT.
- d. JCAHO.

ANS: D DIF: Level: Hard REF: Volume 1, Page 23
OBJ: Category: General TOP: Exam: 2

27. Gonad shielding is required when the gonads lie within ____ cm of the primary x-ray field.

- a. 3
- b. 5
- c. 6
- d. 8

ANS: B DIF: Level: Medium REF: Volume 1, Page 33
OBJ: Category: General TOP: Exam: 1

28. Which of the following radiographic examinations would give a male patient the highest gonad dose?

- a. Limb
- b. Skull
- c. Pelvis
- d. Lumbar spine

ANS: C DIF: Level: Hard REF: Volume 1, Page 35
OBJ: Category: General TOP: Exam: 1

29. Which of the following radiographic examinations would give a female patient the highest gonad dose?

- a. Limb
- b. Skull
- c. Pelvis
- d. Lumbar spine

ANS: D DIF: Level: Hard REF: Volume 1, Page 35
OBJ: Category: General TOP: Exam: 1

30. Which of the following is affected when imaging patients who are obese?

1. Image quality
 2. Ability to transfer safely
 3. Ability to find positioning landmarks
- a. 1 and 2 only
 - b. 1 and 3 only
 - c. 2 and 3 only
 - d. 1, 2, and 3

ANS: D DIF: Level: Hard REF: Volume 1, Page 46
OBJ: Category: General TOP: Exam: None

31. A fundamental responsibility of radiographers is to ensure that each radiation exposure upholds the ALARA concept. ALARA stands for:

- a. as low as reasonably achievable.
- b. as long as radiograph is acceptable.
- c. acceptable limits allowed for radiographic attempts.
- d. attempts to lessen all radiographic allowances.

ANS: A DIF: Level: Medium REF: Volume 1, Page 2
OBJ: Category: General TOP: Exam: None

32. Which organizations jointly revised and adopted the Code of Ethics for Radiologic Technologists in the United States?
- American College of Radiology and the American Registry of Radiologic Technologists
 - American Society of Radiologic Technologists and the American Registry of Radiologic Technologists
 - American College of Radiology and The Joint Commission
 - American Registry of Radiologic Technologists and The Joint Commission

ANS: B DIF: Level: Hard REF: Volume 1, Page 2
OBJ: Category: General TOP: Exam: None

33. A physician who is board certified to read or interpret, x-ray examinations is a:
- hospitalist.
 - radiographer.
 - radiologist.
 - surgeon.

ANS: C DIF: Level: Easy REF: Volume 1, Page 13
OBJ: Category: General TOP: Exam: None