

RA202 Image Production class one

True/False

Indicate whether the sentence or statement is true or false.

- ___ 1. As mA increases contrast increases.
- ___ 2. As mA increases density increases
- ___ 3. As time increases density increases
- ___ 4. As exposure time increase detail decreases
- ___ 5. As kVp increases contrast increases
- ___ 6. Distortion is only affected by changes in mAs
- ___ 7. As the field size increases contrast decreases
- ___ 8. An increase in Grid ratio will decrease contrast
- ___ 9. An increase in Grid ratio will decrease detail
- ___ 10. An increase in screen speed will increase the density on the film

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

- ___ 11. When a slow screen/film system is used with a fast screen/film automatic exposure control system, the resulting images
 - a. are too light
 - b. are too dark
 - c. have improved detail
 - d. have poor detail
- ___ 12. Which of the following groups of exposure factors will produce the greatest radiographic density?
 - a. 100 mA, .30s
 - b. 200mA, .10s
 - c. 400 mA, .03s
 - d. 600 mA, .03s
- ___ 13. What is the grid ratio if the lead strips are 5mm high and .5mm apart?
 - a. 3:1
 - b. 5:1
 - c. 10:1
 - d. 16:1
- ___ 14. Which of the following have an effect on recorded detail?
 - 1. focal spot size
 - 2. type of rectification
 - 3. SID
 - a. 1 and 2
 - b. 1 and 3
 - c. 2 and 3
 - d. 1, 2 and 3
- ___ 15. Types of moving grid mechanisms include
 - 1. oscillating
 - 2. reciprocating
 - 3. synchronous

- a. 1 only
b. 1 and 2
- c. 1 and 3
d. 2 and 3
- ___ 16. As intensifying screen speed decreases, how is radiographic density affected?
a. decreases
b. increases
c. remains unchanged
d. is variable
- ___ 17. Using a 48 inch SID, how much object image distance (OID) must be introduced to magnify an object two times?
a. 8 inch OID
b. 12 inch OID
c. 16 inch OID
d. 24 inch OID
- ___ 18. A film emerging from the automatic processor exhibits excessive density. This may be attributable to which of the following?
1. Developer temperature too high
2. Chemical fog
3. Underreplenishment
a. 1 only
b. 1 and 2
c. 2 and 3
d. 1, 2 and 3
- ___ 19. All of the following affect recorded detail except
a. mA
b. focal spot size
c. screen speed
d. OID
- ___ 20. The continued emission of light by a phosphor after the activating source has ceased is termed
a. fluorescence
b. phosphorescence
c. image intensification
d. quantum mottle
- ___ 21. An unexposed and processed film will have a density of about
a. zero
b. 0.1
c. 1.0
d. 2.5
- ___ 22. A wire mesh test is performed to diagnose screen
a. lag
b. contact
c. resolution
d. intensification
- ___ 23. The exposure factors of 300mA, 0.017 s, and 72 kVp would produce a mAs value of
a. 5
b. 50
c. 500
d. 5000
- ___ 24. An increase in kilovoltage will serve to
a. produce a longer scale of contrast
b. produce a shorter scale of contrast
c. decrease the radiographic density
d. decrease the production of scatter radiation
- ___ 25. The steeper the straight line portion of a characteristic curve for a particular film, the
1. slower the film speed
2. higher the film contrast
3. greater the exposure latitude
a. 1 only
b. 2 only
c. 2 and 3
d. 1, 2 and 3
- ___ 26. The most common method of designating screen speed is
a. medium density
b. intensity factor
c. relative speed (par)
d. spectral matching

- _____ 27. A radiograph is produced at 800 mA, 250 milliseconds with a 100 speed image system. What new milliamperage seconds is required to maintain radiographic density if a 400 speed system is used?
- a. 12.5mAs
 - b. 50mAs
 - c. 200mAs
 - d. 800mAs
- _____ 28. The main purpose of a radiographic grid is to
- a. decrease the exposure to the patient
 - b. increase radiographic density
 - c. decrease radiographic contrast
 - d. absorb scatter radiation
- _____ 29. What is the primary factor that controls the quantity of xray photons being created at the target?
- a. milliamperage seconds
 - b. kilovolts
 - c. SID
 - d. anode bevel
- _____ 30. With all other technical factors remaining the same, an increase in grid ratio will result in
- a. decrease in blur
 - b. decrease recorded detail
 - c. decreased radiographic density
 - d. decreased radiographic contrast

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Answer Section

TRUE/FALSE

1. ANS: F
2. ANS: T
3. ANS: T
4. ANS: T
5. ANS: F
6. ANS: F
7. ANS: T
8. ANS: F
9. ANS: F
10. ANS: T

MULTIPLE CHOICE

11. ANS: A
12. ANS: A
13. ANS: C
14. ANS: B
15. ANS: B
16. ANS: A
17. ANS: D
18. ANS: B
19. ANS: A
20. ANS: B
21. ANS: B
22. ANS: B
23. ANS: A
24. ANS: A
25. ANS: B
26. ANS: C
27. ANS: B
28. ANS: D
29. ANS: A
30. ANS: C