

Grids 2

Multiple Choice

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

- ___ 1. The interactions that produce scatter radiation occur primarily in the:
- tabletop.
 - image receptor.
 - patient.
 - tube housing.
- ___ 2. A scattered photon has _____ energy than the incoming primary beam photon.
- less
 - more
 - less, if the kVp is over 80
 - more, if the kVp is over 80
- ___ 3. Scatter radiation affects radiographic appearance by causing:
- increased distortion.
 - increased recorded detail.
 - decreased contrast.
 - decreased density.
- ___ 4. Which of the following factors affects the quantity of scatter radiation fog on a radiograph?
- Field size*
 - Focal spot size*
 - kVp*
- 1 and 2 only
 - 1 and 3 only
 - 2 and 3 only
 - 1, 2, and 3
- ___ 5. If the size of the x-ray field increases, what happens to scatter radiation fog?
- It increases.
 - It decreases.
 - It remains the same.
 - It increases for the thorax, abdomen, and pelvis projections only.
- ___ 6. If the body part is thicker or larger, the amount of scatter radiation fog will:
- increase.
 - decrease.
 - remain the same.
 - increase, depending on the kVp level.
- ___ 7. How does scatter radiation fog reduce the visibility of detail in a radiographic image?
- By increasing contrast
 - By increasing distortion
 - By decreasing contrast

- d. By decreasing distortion
- ___ 8. What is the principal source of scatter radiation in radiography?
- a. Tube housing
 - b. Patient
 - c. Table
 - d. Collimator
- ___ 9. The most effective and practical way to reduce scatter radiation fog on a radiograph is to:
- a. decrease the OID.
 - b. decrease the SID.
 - c. increase the kVp.
 - d. use a grid.
- ___ 10. The device that is placed between the patient and the IR to absorb scatter radiation is called a:
- a. grid.
 - b. filter.
 - c. gonad shield.
 - d. cassette.
- ___ 11. As compared to an 8:1 grid, a grid with a 12:1 ratio will:
- a. clean up scattered radiation less effectively.
 - b. require less precise centering.
 - c. require more exposure to make a satisfactory radiograph.
 - d. produce less radiographic contrast.
- ___ 12. The number of lead strips per inch is called:
- a. grid radius.
 - b. grid ratio.
 - c. focal range.
 - d. grid frequency.
- ___ 13. What is one of the most important things a limited operator can do to control scatter radiation?
- a. Reduce the thickness of the part.
 - b. Maintain the correct field size.
 - c. Use the exposure technique chart.
 - d. Use the correct grid.
- ___ 14. As a general rule, a grid should be employed when the part thickness is greater than:
- a. 4 cm.
 - b. 10 cm.
 - c. 18 cm.
 - d. 12 in.
- ___ 15. Grids with lead strips that are aligned to coincide with the primary beam angle are called _____ grids.
- a. crosshatch
 - b. focused
 - c. parallel

d. Bucky

- ___ 16. If a grid is misaligned with the central ray, it can cause a light area on the side of the image called:
- coherent scattering.
 - parallax effect.
 - grid cut-off.
 - attenuation.
- ___ 17. What prevents the lead strips in the grid from being seen on the radiograph?
- The grid oscillates.
 - The grid strips are parallel to the beam.
 - The kVp is above 60.
 - The lead strips blend in with kVp settings over 60.
- ___ 18. Which of the following reduces the amount of scatter radiation fog on a radiograph?
- Decrease in kVp*
 - Decrease in field size*
 - Decrease in grid ratio*
- 1 and 2 only
 - 1 and 3 only
 - 2 and 3 only
 - 1, 2, and 3
- ___ 19. Scatter radiation fog will:
- increase brightness.*
 - decrease contrast.*
 - reduce the visibility of detail.*
- 1 and 2
 - 1 and 3
 - 2 and 3
 - 1, 2, and 3
- ___ 20. Grid cut-off will occur when the:
- tube is off-center.*
 - tube is tilted.*
 - SID is too great.*
- 1 and 2
 - 1 and 3
 - 2 and 3
 - 1, 2, and 3

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Answer Section

MULTIPLE CHOICE

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| 2. ANS: A | PTS: 1 | REF: Page 109 |
| 3. ANS: C | PTS: 1 | REF: Page 111 |
| 4. ANS: B | PTS: 1 | REF: Page 111 |
| 5. ANS: A | PTS: 1 | REF: Page 111 |
| 6. ANS: A | PTS: 1 | REF: Page 110 |
| 7. ANS: C | PTS: 1 | REF: Page 111 |
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| 9. ANS: D | PTS: 1 | REF: Page 111 |
| 10. ANS: A | PTS: 1 | REF: Page 112 |
| 11. ANS: C | PTS: 1 | REF: Page 112 |
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