

## MCQs FOR RADIOGRAPHERS

Qs.1. A viewbox for mammographic films should have a brightness of approximately:

- a. 3.5 foot-candles.
- b. 3.5 lumens.
- c. 3500 luxes.
- d. 3500 nits.

ANS D

Qs.2. The maximum field of view which can be obtained with a specific radiographic system is generally limited by the:

- a. Focal spot size.
- b. Anode size.
- c. Anode angle.
- d. Focal Length

ANS: C

Qs.3. The x-ray photon energy range which will be most appropriate and produce the best contrast with iodine is:

- a. 25 keV - 30 keV.
- b. 30 keV - 33 keV.
- c. 33 keV - 40 keV.
- d. 60 keV - 70 keV.

ANS: C

Qs.4. For vascular imaging with iodine contrast media you would expect to get the best contrast by using:

- a. 35 kV.
- b. 65 kV.
- c. 95 kV.
- d. 125 kV.

ANS: B

Qs.5. For routine chest radiography you would expect to get the best contrast characteristics by using:

- a. 35 kV.
- b. 65 kV.
- c. 95 kV.
- d. 125 kV.

ANS: D

Qs.6. The primary factor that limits the maximum MA that can be used during a radiographic exposure is:

- a. Anode angle.

- b. Focal spot size.
- c. Cathode temperature.
- d. Exposure time.

ANS:B

Qs.7. The primary x-ray beam penetration (percent) through a patient can be increased by increasing the:

- a. KV.
- b. MAS.
- c. Film-focus distance
- d. Beam area.

ANS: A

Qs.8. Relatively low KV values are used in some x-ray procedures for the purpose of:

- a. Increasing penetration.
- b. Increasing contrast sensitivity.
- c. Decreasing patient exposure.
- d. Decreasing area contrast.

ANS:B

Qs.9. Changing the KV from 90 to 70 will generally:

- a. Decrease calcium-soft tissue contrast.
- b. Require an increase in MAS by at least a factor of 4
- c. Increase patient exposure.
- d. Decrease iodine-soft tissue contrast.

ANS: C

Qs.10. Changing from a 5:1 ratio to a 10:1 ratio grid will :

- a. Decrease Patient exposure.
- b. Increase Image contrast.
- c. Decrease Required KV or MAS.
- d. Decreased X-ray tube heating.

ANS: B

Qs.11. The radiographic visibility and contrast of a 1 cm soft tissue mass in the body would generally be decreased by an increase in all of the following EXCEPT;

- a. Focal spot size.
- b. Field of view.
- c. KV.
- d. Object-receptor distance.

ANS:A

Qs.12. If a "medium" speed intensifying screen is replaced with a "high" speed screen (same phosphor material) for the purpose of reducing patient exposure, there will be less:

- a. Contrast.
- b. Visibility of anatomical detail.
- c. Quantum noise.

- d. Exposure latitude.

ANS: B

Qs.13. The thickness of an intensifying screen has a significant effect on all of the following EXCEPT:

- a. Image contrast.
- b. Image blurring.
- c. Receptor sensitivity.
- d. Patient exposure.

ANS:A

Qs.14. Underprocessing (underdevelopment) of radiographic film can result in increased film:

- a. Sensitivity.
- b. Contrast.
- c. Fog.
- d. None of the above

ANS:D

Qs.15. The sensitivity (speed) of a radiographic film used with an intensifying screen can be affected by all of the following EXCEPT:

- a. Amount of exposure.
- b. Exposure time.
- c. Developer concentration.
- d. Development temperature.

ANS:A

Qs.16. Compared to normal processing conditions, a general radiographic film developed at a higher temperature will have increase in all of the following EXCEPT:

- a. Sensitivity (speed).
- b. Hypo retention.
- c. Base + fog density.
- d. Density.

ANS:B

Qs.17. If a "high" speed radiographic film is substituted for a "medium" speed film the results would be:

- a. Higher contrast.
- b. More visibility of detail because of more blurring.
- c. Reduced patient exposure.
- d. Increased quantum noise.

ANS:A

Qs.18. Factors which would be appropriate for conventional chest radiography are:

- a. Low contrast film.
- b. 0.1 mm focal spot.
- c. 120 kV.
- d. 1 to 1 ratio grid.

ANS:C

Qs.19. Conditions which can reduce contrast in a general radiographic image include:

- a. Underexposure.
- b. Overexposure.
- c. Underdevelopment.
- d. All of the Above

ANS: D

Qs.20. If the KV for an abdominal radiograph is changed from 80 kV to 90 kV and the MAS is adjusted to give the same film density:

- a. The exposure to the patient will increase.
- b. The x-ray tube heating will decrease.
- c. The contrast will increase.
- d. The quantum noise will decrease.

Qs.21. Potential advantages of using a higher KV (90 rather than 70) in radiography include all of the following EXCEPT:

- a. Increased patient exposure.
- b. Reduced x-ray tube heating.
- c. Shorter exposure times.
- d. Decreased area contrast.

ANS:A

Qs.22.The single-coated X Ray film is used in all of the following EXCEPT:

- a. Mammography
- b. CT Scan films
- c. Skull X Ray
- d. Fluroscopy films

ANS: C

Qs.23.All of the following are true for Dental X ray films EXCEPT:

- a. Embossed dot on film is to be kept near the crown of the examination tooth
- b. Corners have sharp angles
- c. Films are protected by lead foils
- d. Occlusion film size is 2 ¼ X 3"

ANS: B

Qs.24.Testing the efficiency of the washing process during X ray film processing is done by estimation of

- a. Residual Iodine
- b. Residual Silver
- c. Residual Thiosulphate
- d. Residual Chlorine

ANS: C

Qs.25. Which of the following Radionuclides have the shortest half life?

- a. Radioactive Iodine
- b. Radioactive phosphorus
- c. Technetium 99m
- d. Radioactive Cobalt

ANS: C

Qs.26. Annual effective dose of radiation for X –Ray technicians is less than

- a. 30 mSv
- b. 100mSv
- c. 100mRem
- d. 5 mRem

ANS: A

Qs.27. All of the following are life saving measures in case of Contrast reaction EXCEPT:

- a. Inj. Rantac
- b. Inj Adrenalin
- c. IV Saline infusion
- d. Inj Phenargan

ANS: A