Model Questions For RT Level – II

1. Eclectro magnetic radiation produced by de excitation of the nucleus is
   a. X-rays
   b. Gamma rays
   c. Both a & b
   d. None
2. The target material of an X-ray equipment is:
   a. Platinum
   b. Copper
   c. Tungsten
   d. Lead
3. Source, bigger in size will have:
   a. High intensity
   b. High specific activity
   c. Low specific activity
   d. High energy
4. Isotope becomes radioactive by:
   a. Getting electron
   b. Releasing electron
   c. Bombardment of neutron
   d. Bombardment of proton
5. Very short wavelength electromagnetic radiation produced when electrons travelling at high speeds collide with matter is called:
   a. X-radiation
   b. Beta radiation
   c. Gamma radiation
   d. None of the above
6. Short wavelength electromagnetic radiation produced during the disintegration of nuclei of radioactive substances is called:
   a. X-radiation
   b. Gamma radiation
   c. Scatter radiation
   d. Backscatter radiation
7. When producing radiographs if the kilovoltage is increased
   a. The subject contrast decreases .
   b. The film contrast decreases
   c. The subject contrast increases
   d. The film contrast increases
8. Penetrating power of X-rays depends on:
   a. Kv
   b. mA
   c. b & a
   d. None

9. Which has the shortest wavelengths?
    a. Visible light
    b. Microwaves
    c. 100 kilovolt peak X-rays
    d. Infrared radiation
10. Depleted uranium is used some radiography cameras because it is:
    a. A good shielding material
    b. A low density material and so light
    c. Cheap and easily available
11. Filter material built in X ray tube is having:
    a. High atomic no.
    b. Low atomic no.
    c. More strength
    d. None
12. The material used for film base is:
    a. Plastic
    b. Synthetic
    c. Polyester
    d. Cellulose
13. Degree of blackening is expressed in terms of
    a. Radiographic contrast
    b. Subject contrast
    c. Optical density
    d. Film contrast
14. A fluorescent intensifying screen will :
    a. Transform X-ray energy into visible or ultraviolet light.
    b. Result in reticulation
    c. Decrease the graininess of the image when using gamma rays
    d. Increase the definition in a radiograph
15. A graph which expresses the relationship between the logarithm of the exposures applied to a photographic material and the resulting photographic density is called
    a. A bar chart
    b. An exposure chart
    c. The characteristic curve
    d. A logarithmic chart
16. Purpose of double coating of emulsion on Xray films is to:
    a. Increase the speed of film
    b. Decrease the speed of film
    c. Decrease the contrast of film
    d. Reduce the inherent unsharpness
17. The density difference between two selected portions of a radiograph is known as
    a. Unsharpness
    b. Radiographic contrast
    c. Specific activity

d. Subject density

18. Unexposed boxes of X-ray film should be stored:
    a. Flat
    b. On edge or end
    c. In a pile
    d. It doesn't matter
19. The extreme left side film in the characteristic curves is:
    a. Superfast
    b. Fast
    c. Medium
    d. Slow
20. The density difference between two areas on radiograph is
    a. Sensitivity
    b. Contrast
    c. Definition
    d. Flaw detection
21. The ability to detect smallest discontinuity is:
    a. Dfinition
    b. Contrast
    c. Sensitivity
    d. None
22. The film exposed to normal light and processed gives:
    a. Optional density
    b. Fog density
    c. Metallic
    d. Dark color
23. If the contact between film and screen is not proper it gives:
    a. Un sharpness
    b. Fogging
    c. Steaks
    d. Black spots
    e. None
24. The black image on the radiograph is due to:
    a. Silver bromide
    b. Metallic silver
    c. Metallic bromide
    d. None
25. The light and dark images on the radiographs is due to:
    a. Thin and thick silver areas
    b. Thin silver
    c. Un exposed and exposed silver
    d. None
26. Yellow stains are due to these two causes:
    a. Over development, under exposure

b. Over exposure, under development
c. Over exposure, over development
d. Under exposure, under development

27. The smallest size in ASTM plaque type is
    a. 10 thou
    b. 12 Thou
    c. 5 Thou
    d. 7 Thou
28. The main steps in films processing are:
    a. Developing, fixing, washing, with soap water
    b. Developing, fixing, washing with (acetic acid (2%) +water)
    c. Developing, fixing, washing in running water
    d. Fixing, developing, drying
29. Fixer is
    a. Acid
    b. Base
    c. Neutral
    d. None
30. As a check on the adequacy of the radiographic technique it is customary to place a standard test piece on the source side of the specimen. This standard test piece is called a,
    a. Reference plate
    b. Lead screen
    c. Penetrameter
    d. Illumination
31. To prevent excessive backscatter from reaching a radiographic film one should
    a. Back the cassette with a sheet of lead, the thickness needed depending on the radiation quality
    b. Place a mask between the specimen and the front surface of thefilm
    c. Back the exposure holder with a thick sheet of lead (at least ½ inch).
    d. Place a filter in the X-ray or Gamma ray beam near the source or S-ray tube
32. Kilovolatage, exposure time and source to film distance are three of the most important X-ray exposure factors that can be controlled. A fourth such exposure factor is:
    a. Focal point sixe
    b. Temperature
    c. Filament to focal spot distance
    d. Milliamperage
33. The three main steps in processing a radiograph are:
    a. Developing, frilling and fixation
    b. Developing, fixation and washing
    c. Exposure, developing, and fixation
    d. Developing, reticulating and fixation
34. White crescent shaped marks on an exposed X-ray film are most likely caused by
    a. Crimping film after exposure
    b. Crimping film before exposure
    c. Sudden extreme temperature change while processing

d. Warm or exhausted fixer

35. A graph showing the relation between material thickness, kilovoltage and exposure is called:
    a. A bar chart
    b. An exposure chart
    c. A characteristic curve
    d. An H & D curve
36. The purpose of fixing a film is :
    a. To remove all the undeveloped silver salts of the emulsion
    b. To leave the developed silver as a permanent image
    c. To harden the gelatin
    d. All of the above.
37. The development time for manually processing X-ray film is:
    a. 12 to 18 minutes in processing solution at 75 degree F
    b. 3 to 8 minutes in processing solutions at 60 degree F
    c. 12 to 18 minutes in processing solutions at 68 degree F
    d. 5 to 8 minutes in processing solutions at 68 degree C
38. When referring to a “2T” or “4T” hole in the ASTM penetrameter, T refers to
    a. The part thickness
    b. The penetrameter thickness
    c. The time of exposure
    d. The time of developing
39. Penetrameters are used for:
    a. Determining the penetrating power of the radiation
    b. Checking the quality of the image
    c. Minimizing the sensitivity of radiograph
40. The density of a radiograph image refers to:
    a. Thickness of the film
    b. The thickness of the specimen
    c. The weight of the film
    d. The degree of the film blackening

Ans:

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