Errata – 2nd printing 03/22

The following text correction pertains to the second edition of the ASNT Study Guide: Industrial Radiography Radiation Safety. Subsequent printings of the document will incorporate the corrections into the published text.

The attached corrected page applies to the second printing 03/22. In order to verify the print run of your book, refer to the copyright page. Ebooks are updated as corrections are found.

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Correction

For review question 30, the correct answer is “a. 11.0 mrem (110 μSv)” and the answer key should read “30a.”
33. While using 88 Ci of iridium 192 (3256 GBq), where would be the high-radiation area boundary? Assume a standard dose rate of 5.2 R/h/Ci at 1 ft (52 mSv/h/Ci at 1 ft).
   a. 68 ft (20.73 m)
   b. 96 ft (29.27 m)
   c. 43 ft (13.11 m)
   d. 27 ft (8.23 m)

34. A thickness of 0.2 in. (4.83 mm) of lead will reduce the exposure of iridium 192 to one-half its original intensity. This is known as the:
   a. half-layer value of lead for the energies associated with iridium 192.
   b. half-life value of lead for the energies associated with iridium 192.
   c. half-value layer of lead for the energies associated with iridium 192.
   d. half-value of lead for the energies associated with iridium 192.

35. Assume that 0.2 in. (5.08 mm) of lead is 1 HVL. How many HVLs would be in a sheet of lead 0.6 in. (15.24 mm) in thickness?
   a. 1 HVL
   b. 3 HVLs
   c. 5 HVLs
   d. 2 HVLs

36. If 0.2 in. (5.08 mm) of lead is 1 HVL, and there is a total of 3 HVLs of lead between the radiographer and an intensity of 100 mR/h (1000 µSv/h), what would the exposure rate be where the radiographer is?
   a. 50 mR/h (500 µSv/h)
   b. 25 mR/h (250 µSv/h)
   c. 12.5 mR/h (125 µSv/h)
   d. 33 mR/h (330 µSv/h)

37. Assume 0.50 in. (12.7 mm) of steel equals 1 HVL for iridium 192. How many HVLs would be in 1.5 in. (38.1 mm) of steel?
   a. 3.28 HVLs.
   b. 3.0 HVLs.
   c. 3.5 HVLs.
   d. 0.328 HVLs.

38. If 0.2 in. (5.08 mm) of lead is 1 HVL, a piece of lead 0.4 in. (10.16 mm) thick would reduce the exposure rate by:
   a. 25%
   b. 50%
   c. 75%
   d. 100%

39. A 50 Ci (1850 GBq) source of iridium 192 has a surface reading of 50 mR/h (500 µSv/h). What would the surface reading be after 150 days?
   a. 20 mR/h (200 µSv/h)
   b. 50 mR/h (500 µSv/h)
   c. 12.5 mR/h (125 µSv/h)
   d. 25 mR/h (250 µSv/h)

**ANSWERS:**

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