

Radiation Quantities and Units

- Which of the following is not a unit of energy:
 - Heat unit
 - MeV
 - Watt
 - Joule
- If the muscle tissue is exposed to 50 roentgens of x-rays, this would produce an approximate dose of:
 - 50 rad
 - 50 Gy
 - 50 sievert
 - 50 becquerel
- A gray is equal to:
 - 10 roentgen
 - 100 rad
 - 1000 rad
 - 1 Ci
- 1 curie is equal to:
 - 106 becquerel
 - 103 becquerel
 - 3.7×10^{10} becquerel
 - 37 becquerel
- Exposure is defined for ionization produced in:
 - Water
 - Tissue
 - Air
 - Fat
- If a charge of 10 coulomb passes through a meter in 2 seconds, the current is:
 - 20 amps
 - 5 amps
 - 10 amps
 - 8 amps

7. In the following, match the quantity with the corresponding unit:

- * A. Rad
B. Ci
C. Roentgens
D. MeV
- a. Electron Beam energy
b. Exposure
c. Absorbed dose
d. Radioactivity

8. Which of the following is not a unit of energy:

- * A. Rad
B. cGy
C. Volt
D. Joules

9. One roentgen corresponds to a charge of:

- * A. 3.7×10^{10} disintegrations/sec
B. 2.58×10^{-4} coulomb/kg
C. 0.03 esu of electrostatic charge
D. 1 electron volt

10. Which of the following is not an SI unit:

- * A. Kilogram
B. Meter
C. Ci
D. Second

11. Match the following units with the quantity.

- * A. Hz
B. Amp
C. Angstrom
D. coulomb
E. kV
- a. Wavelength
b. Frequency
c. Charge
d. Current
e. Tube potential

12. A monitor unit in a linac usually represents an absorbed dose of:

- A. 1 Gy
- B. 0.01 Gy
- C. 100 Gy
- D. 0.1 Gy

13. A picocurie is equal to:

- A. 0.1 Ci
- B. 0.001 Ci
- C. 10^{-6} Ci
- D. 10^{-9} Ci
- E. 10^{-12} Ci

14. Nanocoulomb is equal to:

- A. 10^{-3} coulomb
- B. 10^{-6} coulomb
- C. 10^{-9} coulomb
- D. 10^{-12} coulomb