

Name _____

_____ 1) Which isotope is most commonly used in the radioactive dating of the remains of organic materials?

- A) ^{14}C B) ^{16}N C) ^{32}P D) ^{37}K

_____ 2) Which procedure is based on the half-life of a radioisotope?

- A) accelerating to increase kinetic energy
B) radiating to kill cancer cells
C) counting to determine a level of radioactivity
D) dating to determine age

_____ 3) Cobalt-60 and iodine-131 are radioactive isotopes that are used in

- A) dating geologic formations
B) industrial measurements
C) medical procedures
D) nuclear power

_____ 4) Which isotope is used to treat cancer?

- A) C-14 B) U-238
C) Co-60 D) Pb-206

_____ 5) Which radioisotope is used to treat thyroid disorders?

- A) Co-60 B) I-131 C) C-14 D) U-238

_____ 6) The course of a chemical reaction can be traced by using a

- A) polar molecule B) diatomic molecule
C) stable isotope D) radioisotope

_____ 7) Radioisotopes used for medical diagnosis must have

- A) long half-lives and be quickly eliminated by the body
B) long half-lives and be slowly eliminated by the body
C) short half-lives and be quickly eliminated by the body
D) short half-lives and be slowly eliminated by the body

_____ 8) A radioisotope is called a tracer when it is used to

- A) kill bacteria in food
B) kill cancerous tissue
C) determine the age of animal skeletal remains
D) determine the way in which a chemical reaction occurs

_____ 9) Radiation used in the processing of food is intended to

- A) increase the rate of nutrient decomposition
B) kill microorganisms that are found in the food
C) convert ordinary nutrients to more stable forms
D) replace chemical energy with nuclear energy

_____ 10) A radioisotope which is sometimes used by doctors to pinpoint a brain tumor is

- A) carbon-12 B) lead-206
C) technetium-99 D) uranium-238