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1. A serious risk factor associated with the operation of a nuclear power plant is the production of
    - A) acid rain
    - B) helium gas
    - C) greenhouse gases, such as CO<sub>2</sub>
    - D) radioisotopes with long half-lives
  2. Which risk is associated with using nuclear fission to produce energy in a power plant?
    - A) depletion of hydrocarbons
    - B) depletion of atmospheric oxygen
    - C) exposure of workers to radiation
    - D) exposure of workers to sulfur dioxide
  3. What is a problem commonly associated with nuclear power facilities?
    - A) A small quantity of energy is produced.
    - B) Reaction products contribute to acid rain.
    - C) It is impossible to control nuclear fission.
    - D) It is difficult to dispose of wastes.
  4. One benefit of nuclear fission reactions is
    - A) nuclear reactor meltdowns
    - B) storage of waste materials
    - C) biological exposure
    - D) production of energy
  5. Which statement explains why nuclear waste materials may pose a problem?
    - A) They frequently have short half-lives and remain radioactive for brief periods of time.
    - B) They frequently have short half-lives and remain radioactive for extended periods of time.
    - C) They frequently have long half-lives and remain radioactive for brief periods of time.
    - D) They frequently have long half-lives and remain radioactive for extended periods of time.
  6. Referring to Table N, which substance is a radioactive waste product that is safest to release into the atmosphere after it has decayed to a safe radiation level?
    - A) radon-222
    - B) radium-226
    - C) cesium-137
    - D) cobalt-60
  7. Which type of reaction produces energy and intensely radioactive waste products?
    - A) fusion of tritium and deuterium
    - B) fission of uranium
    - C) burning of heating oil
    - D) burning of wood
  8. According to Table N, which radioactive waste can be stored for decay and then safely released directly into the environment?
    - A) N-16
    - B) Sr-90
    - C) Cs-137
    - D) Pu-239
  9. Which is a gaseous radioactive waste produced during some fission reactions?
    - A) nitrogen-16
    - B) thorium-232
    - C) uranium-235
    - D) plutonium-239
  10. The waste products from nuclear reactors can be in the form of
    - A) solids, only
    - B) solids and liquids, only
    - C) solids and gases, only
    - D) solids, liquids, and gases
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