

Example multiple choice questions created from end of chapter questions. The quizzes on the text web site and CDrom are also good places to get practice questions.

Some are **concept questions**, some are **factual questions** and some are **calculation-type questions**.

1. Control rods in a fission reactor function by

- a. cooling down the reactor fuel
- b. preventing oxygen from reaching the fuel.
- c. absorbing neutrons generated in the fission process.
- d. absorbing the electrons emitted by the reaction.
- e. preventing Uranium to decompose to Plutonium.

2. What quantity of energy would be produced as one atom of plutonium-238 undergoes alpha decay? The atomic mass of ^{238}Pu nucleus is 238.0495 amu ($3.953 \times 10^{-22}\text{g}$), the atomic mass of uranium-234 nucleus is 234.0409 amu ($3.886 \times 10^{-22}\text{g}$) and an alpha particle has a mass of $6.64465 \times 10^{-24}\text{g}$. The speed of light is $2.998 \times 10^8\text{ m/sec}$.

- a. $5.972 \times 10^{-7}\text{ J}$
- b. $4.975 \times 10^{-12}\text{ J}$
- c. $6.972 \times 10^{-10}\text{ J}$
- d. $2.594 \times 10^{-8}\text{ J}$
- e. none of the above

ANSWER 1:C
ANSWER 2: B