

Name: \_\_\_\_\_

## Extra Credit Quiz

Physics 105

25 November 2002

- 1. Uranium is created
  - (a) in stars like our sun.
  - (b) in the hot core of the Earth.
  - (c) no, uranium was always there.
  - ⇒ (d) **in supernova explosions.**
  - (e) in the night kitchen.
  
- 2. Nuclear fusion is the process by which
  - (a) a large nucleus breaks into 2 or more pieces.
  - ⇒ (b) **two nuclei come together to form a single nucleus.**
  - (c) two atoms form a molecule.
  - (d) radioactive waste is cast in molten glass.
  - (e) a hot new cuisine is created.
  
- 3. A fission chain reaction can be sustained by the isotope
  - ⇒ (a)  ${}_{92}^{235}\text{U}$  or  ${}_{94}^{239}\text{Pu}$ .
  - (b)  ${}_{91}^{238}\text{Pa}$  or  ${}_{93}^{238}\text{Np}$ .
  - (c)  ${}_{90}^{234}\text{Th}$  or  ${}_{92}^{238}\text{U}$ .
  - (d)  ${}_{92}^{238}\text{U}$  or  ${}_{90}^{234}\text{Th}$ .
  - (e)  ${}_{92}^{235}\text{U}$  or  ${}_{92}^{238}\text{U}$ .
  
- 4. The Manhattan Project occurred during
  - (a) the War of 1812.
  - (b) the Korean War.
  - (c) the Vietnam War.
  - (d) World War I.
  - ⇒ (e) **World War II.**