Nuke Exam 3/17/06 3:10 PM

BLITZ: Ch 28 Nuclear

Form D-H

Name	Period
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This is a Take Home Exam. You may use your notes but you may NOT use help from human beings.

EXPLAIN IN COMPLETE SENTENCES AND GIVE EXAMPLES:

You MUST HAND WRITE THIS EXAM!! NO TYPED PAPERS WILL BE ACCEPTED!

- 1. Positron.
- 2. Atomic number.
- 3. Proton.

11.

- 4. Isotope.
- 5. Beta particle.

*** COMPLETE THESE EQUATIONS:

11.
$${}_{6}C^{12}$$
 + ? ---> ${}_{102}No^{254}$ + ${}_{0}n^{-1}$

12.
$$_{99}\text{Es}^{254}$$
 + $_{2}\text{He}^{4}$ ---> ? + $_{0}\text{n}^{1}$

13.
$${}_{1}H^{2}$$
 + ${}_{1}H^{3}$ ---> ${}_{2}He^{3}$ + ?

14.
$$_{2}\text{He}^{3}$$
 + $_{13}\text{Al}^{27}$ ---> $_{14}\text{Si}^{30}$ + ?

$$15. \ \ _{92}U^{235} \quad \ + \qquad \ _{0}n^{1} \quad \ \, ---> \qquad \ _{59}Pr^{147} \qquad \ + \qquad \ ? \qquad \ \ + \qquad \ 3_{0}n^{1}$$

- 16. Diagram a Nuclear Reactor and tell the function of its parts.
- 17. Diagram a Nuclear Power Plant and compare it to a coal fired power plant.
- 18. Explain how Radioactive Dating tells us the age of ancient artifacts.
- 19. Explain Critical Mass and describe how to make a nuclear bomb.
- 20. Explain how to separate the isotopes of Uranium.

When finished, please STAPLE this exam onto your papers and turn in on due date.