Nuke Exam 3/17/06 3:07 PM

BLITZ: Ch 28 Nuclear

Form A-C

| 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!

Define these terms and give and example:

- 1. Atomic Number.
- 2. Mass Number
- 3. Isotope.
- 4. Alpha particle.
- 5. Neutron.

*** COPY THESE EQUATIONS AND COMPLETE THEM ON YOUR PAPER:

6.
$${}_{94}Pu^{239} + {}_{0}n^1 \longrightarrow ?$$

7.
$$_{99}\text{Es}^{254} + _{2}\text{He}^{4} ---> ? + _{2} _{0}\text{n}^{1}$$

8.
$${}_{6}C^{12}$$
 + ? ---> ${}_{102}No^{254}$ + 2 ${}_{0}n^{1}$

9.
$$_{1}H^{2} + _{1}H^{3} ---> _{2}He^{4} + ?$$

10.
$$_{92}U^{238} + ? ---> _{92}U^{239}$$

11.
$$_{2}\text{He}^{4} + _{13}\text{Al}^{27} ---> _{14}\text{Si}^{30} + ?$$

12.
$$_{1}H^{2}$$
 + $_{6}C^{12}$ ---> $_{7}N^{13}$ + ?

13. ? +
$$_{0}n^{1}$$
 ---> $_{94}Pu^{241}$

14.
$${}_{5}B^{11} + {}_{94}Pu^{251} ---> ? + 3 {}_{0}n^{1}$$

15.
$$_{3}\text{Li}^{6} + _{0}n^{1} \longrightarrow ? + _{1}\text{H}^{3}$$

- 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.