

## Unit 11E Practice Questions I Nuclear Chemistry

Name:

Date:

## **Directions:**

11.

Match the terms in the box on the right to the statements below by writing the letter next to the terms in the blank spaces next to the statements.

Answers can be used more than once.

- a. alpha
- b. beta
- c. gamma
- d. neutron
- e. proton

2 can penetrate thick aluminum, but not concrete 3 cannot penetrate paper 4 4 He 5 1e 6 Z number of an element is the number of these 7 a reactant and a product of nuclear fission 8 repel each other in the nucleus 9 has no mass and no charge 10 Two isotopes of the same element have the same number of these in common.	1.	can penetrate paper, but not thick aluminum
44 He 50 e 6 Z number of an element is the number of these 7 a reactant and a product of nuclear fission 8 repel each other in the nucleus 9 has no mass and no charge	2.	 can penetrate thick aluminum, but not concrete
5	3.	cannot penetrate paper
6. Z number of an element is the number of these 7. a reactant and a product of nuclear fission 8. repel each other in the nucleus 9. has no mass and no charge	4.	 4 He
7 a reactant and a product of nuclear fission  8 repel each other in the nucleus  9 has no mass and no charge	5.	<sup>0</sup> <sub>-1</sub> e
8 repel each other in the nucleus 9 has no mass and no charge	6.	 Z number of an element is the number of these
9. has no mass and no charge	7.	a reactant and a product of nuclear fission
	8.	repel each other in the nucleus
10 Two isotopes of the same element have the same number of these in common.	9.	has no mass and no charge
	10.	 Two isotopes of the same element have the same number of these in common.

## Complete these reaction equations, using the periodic table to identify any elements.

Two isotopes of the same element have different number of these.

12. 
$${}^{214}_{83} \text{ Bi} \rightarrow {}^{0}_{-1} \text{e} + \underline{}$$

13. 
$${}^{54}_{26}$$
 Fe +  ${}^{4}_{2}$  He  $\rightarrow {}^{1}_{0}$  n + \_\_\_\_\_\_

14. 
$${}^{230}_{90} \text{ Th} \rightarrow {}^{4}_{2} \text{ He} + \underline{}$$

16. 
$${}^{1}_{0}$$
n +  ${}^{239}_{94}$  Pu  $\rightarrow {}^{137}_{52}$  Te + \_\_\_\_\_ + 3  ${}^{1}_{0}$  n