



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 Which **type of radiation** continues in a straight line when passed through an electric field?

- A alpha
- B beta
- C gamma
- D proton



2 **Artificial transmutation** is brought about by using accelerated particles to bombard an atom's

- A nucleus
- B valence shells
- C occupied sublevels
- D inner principal energy levels

3 Which isotope can be used as a **tracer** in an **organic reaction**?

- A H-1
- B H-2
- C C-12
- D C-14



4 **Water** and **molten sodium** are used in nuclear reactors as

- A coolants
- B moderators
- C control rods
- D fuels

5



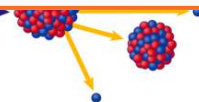
## PREVIEW

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7

- A mass is converted into energy
- B energy is converted into mass
- C ionic bonds are broken
- D covalent bonds are broken

- B neutralization
- C oxidation-reduction
- D transmutation



9

The **decay of which radioisotope** can be used to estimate the **age** of the fossilized remains of an insect?

- A Rn-222
- B I-131
- C Co-60
- D C-14



10

Which substance can be used as **both a coolant** and a **moderator** in a nuclear reactor?

- A heavy water
- B carbon dioxide
- C graphite
- D helium





## ANSWER KEY

Which **type of radiation** continues in a straight line when passed through an electric field?

- A alpha
- B beta
- C gamma
- D proton



(C)

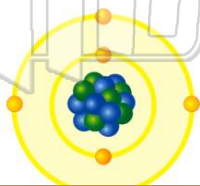
**Artificial transmutation** is brought about by using accelerated particles to bombard an atom's

- A nucleus
- B valence shells
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- D inner principal energy levels

(a)

Which isotope can be used as a **tracer** in an **organic reaction**?

- A H-1
- B H-2
- C C-12
- D C-14



(d)

**Water** and **molten sodium** are used in nuclear reactors as

- A coolants
- B moderators
- C control rods
- D fuels

(a)

**PREVIEW**

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- B energy is converted into mass
- C ionic bonds are broken
- D covalent bonds are broken

D transmutation

The **decay** of which **radioisotope** can be used to estimate the **age** of the fossilized remains of an insect?

- A Rn-222
- B I-131
- C Co-60
- D C-14



(d)

Which substance can be used as **both a coolant** and a **moderator** in a nuclear reactor?

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- C graphite
- D helium

(a)