



# Chemical Changes

## Multiple Choice Questions

### Set 1

Tick **one** box.

1. What is formed when a metal reacts with oxygen?

- A. a metal alloy ☐
- B. a metal carbonate ☐
- C. a metal oxide ☐
- D. a metal sulfate ☐

2. What happens in a displacement reaction?

- A. a less reactive metal takes the place of a more reactive metal in a compound ☐
- B. a less reactive non-metal takes the place of a more reactive non-metal in a compound ☐
- C. a more reactive metal takes the place of a less reactive metal in a compound ☐
- D. a more reactive non-metal takes the place of a less reactive non-metal in a compound ☐

3. Which of the following will have the most vigorous reaction with dilute acid?

- A. copper ☐
- B. iron ☐
- C. magnesium ☐
- D. zinc ☐

4. What is produced when a metal reacts with an acid?

- A. a salt and carbon dioxide ☐
- B. a salt and hydrogen ☐
- C. a salt and oxygen ☐
- D. a salt and water ☐

5. Which type of ion do acids produce in aqueous solutions?

- A.  $\text{H}^+$  ☐
- B.  $\text{H}^-$  ☐
- C.  $\text{OH}^+$  ☐
- D.  $\text{OH}^-$  ☐



6. What colour is produced when universal indicator is added to a strong acid?

- A. blue ☐
- B. green ☐
- C. purple ☐
- D. red ☐

7. What type of reaction occurs between an acid and an alkali?

- A. displacement ☐
- B. neutralisation ☐
- C. oxidation ☐
- D. reduction ☐

8. What is the name of the negative electrode in electrolysis?

- A. anode ☐
- B. cathode ☐
- C. diode ☐
- D. zincode ☐

9. Aluminium can be extracted from molten aluminium oxide by electrolysis.

Large amounts of energy are required to melt the aluminium oxide.

What is aluminium oxide mixed with to reduce energy costs?

- A. bauxite ☐
- B. carbon ☐
- C. cryolite ☐
- D. water ☐

10. In the electrolysis of aqueous sodium chloride, what is produced at the anode?

- A. chlorine ☐
- B. hydrogen ☐
- C. sodium ☐
- D. oxygen ☐