



# Using Resources **Multiple Choice Questions**

## Set 5 (Chemistry Only)

You may use a periodic table to help you answer these questions.

Tick **one** box.

1. What is corrosion?
  - A. a neutralisation reaction involving a concentrated acid
  - B. a process in which a material becomes toxic over time
  - C. the destruction of materials by chemical reactions with substances in the environment
  - D. where materials are gradually worn away through physical contact
2. Which metal could be used to galvanise iron?
  - A. copper
  - B. lead
  - C. silver
  - D. zinc
3. Which alloy could be used to make aeroplanes?
  - A. aluminium–magnesium alloy
  - B. brass
  - C. bronze
  - D. steel
4. 24 carat gold is 100% pure gold metal. Calculate the number of carats in a gold necklace where 12.5% of its composition is a mixture of copper, zinc and silver.
  - A. 4 carats
  - B. 9 carats
  - C. 18 carats
  - D. 21 carats
5. Which statement about thermosetting polymers is correct?
  - A. they can be used to make plastic carrier bags
  - B. they have covalent bonds between their long polymer chains
  - C. they have weak intermolecular forces between their long polymer chains
  - D. they soften and melt when they are heated

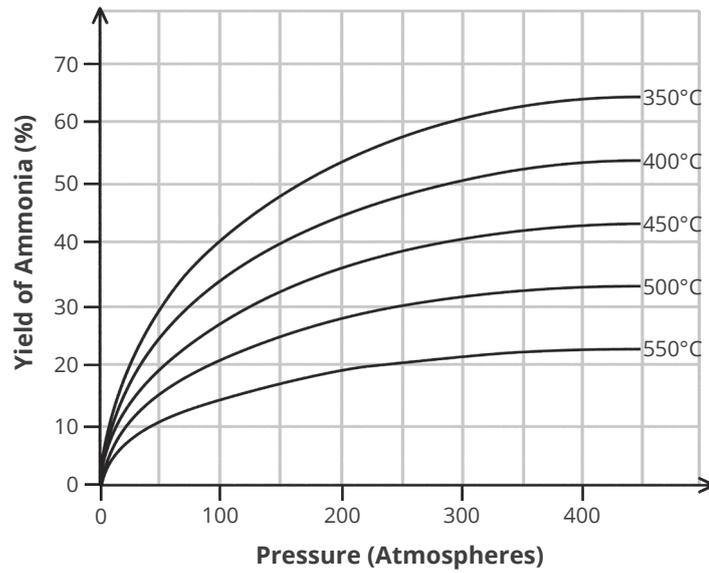


6. Which material would be most suitable for making a boiling tube?
- A. borosilicate glass
  - B. fibreglass
  - C. soda-lime glass
  - D. clay ceramic
7. How are the raw materials used in the Haber process obtained?
- A. hydrogen and nitrogen are both obtained from air
  - B. hydrogen is obtained from air and nitrogen is obtained from the decomposition of nitrogen oxide
  - C. hydrogen is obtained from the reaction between natural gas and steam and nitrogen is obtained from the air
  - D. none of the above
8. Which statement about the Haber process is **not** correct?
- A. the Haber process is a reversible reaction
  - B. unreacted hydrogen and nitrogen are recycled
  - C. using a high temperature and a high pressure ensures both a fast reaction and a high yield
  - D. when the mixture of gases is cooled the ammonia liquefies and can be removed
9. Which elements are found in NPK fertilisers?
- A. nickel, phosphorus and krypton
  - B. nickel, potassium and phosphorus
  - C. nitrogen, phosphorus and potassium
  - D. nitrogen, potassium and krypton



**Figure 1** shows the effect of temperature and pressure on the yield of ammonia in the Haber process.

**Figure 1**



**10. (HT Only)** Which pair of conditions below would produce the highest yield of ammonia?

- A. 350°C and 100 atmospheres
- B. 400°C and 300 atmospheres
- C. 450°C and 200 atmospheres
- D. 500°C and 300 atmospheres