



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?

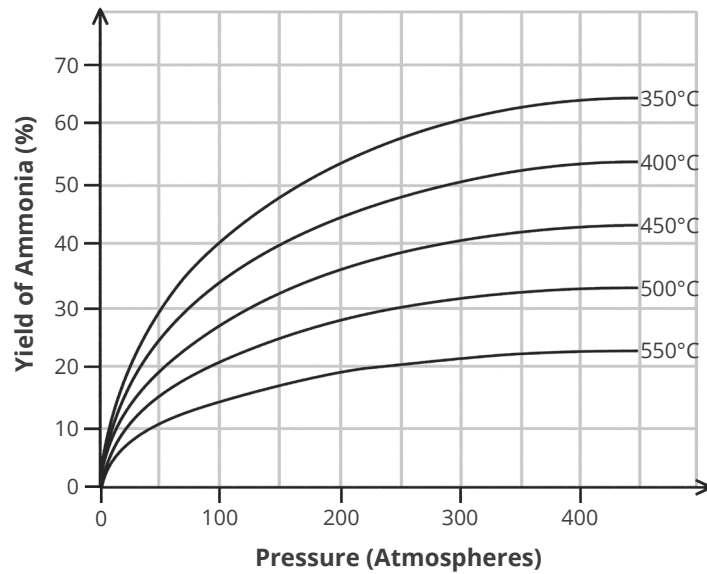
- A. they can be used to make plastic carrier bags ☐
- B. they have covalent bonds between their long polymer chains ☐
- C. they have weak intermolecular forces between their long polymer chains ☐
- D. they soften and melt when they are heated ☐



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

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