

## Metals, Alloys and Polymers

1 Which **one** of the following statements about ferrous metals is **not** true?

- A Ferrous metals are mostly made up of iron.
- B Ferrous metals are not magnetic.
- C A protective coating is commonly applied to ferrous metals to prevent them from rusting.
- D Tool steel is a ferrous metal.

  
  
  


[1 mark]

2 Which **one** of the following is a type of ferrous metal?

- A Low carbon steel
- B Aluminium
- C Copper
- D Brass

  
  
  


[1 mark]

3 State **two** properties of copper that make it suitable for use in electrical wiring.

1. ....
2. ....

[2 marks]

4 **Figure 1** shows a brass tap. State **two** properties of brass that make it a suitable material for this purpose.

1. ....
2. ....

[2 marks]



**Figure 1**

5 High speed steel is an alloy that can be used to make high speed drill bits.

Explain why high speed steel is a suitable material for this purpose.

.....

.....

.....

[2 marks]

6 Which **one** of the following is a type of thermoforming plastic?

- A Urea-formaldehyde
- B Acrylic
- C Melamine-formaldehyde
- D Polyester resin

  
  
  


[1 mark]

7 Which **one** of the following statements is **not** true?

- A Epoxy resin is rigid and corrosion-resistant.
- B Polyester resin is added to glass fibres to form glass-reinforced plastic.
- C Phenol-formaldehyde is heat-resistant, but hard to mould into different shapes.
- D High impact polystyrene is rigid and used for vacuum forming.

  
  
  


[1 mark]

8 Suggest a plastic that would be suitable for making each of the products shown in **Figures 2-4**. Give **one** reason for each answer.



**Figure 2**



**Figure 3**



**Figure 4**

a) **Figure 2**

Plastic: .....

Reason: .....

[2 marks]

b) **Figure 3**

Plastic: .....

Reason: .....

[2 marks]

c) **Figure 4**

Plastic: .....

Reason: .....

[2 marks]

Score:  / 16

