

## Design & Technology

# Alloying

### Materials required for questions

---

- Pencil
- Rubber
- Calculator

### Instructions

---

- Use black ink or ball-point pen
- Try to answer all questions
- Use the space provided to answer questions
- Calculators can be used if necessary
- For the multiple choice questions, circle your answer

### Advice

---

- Marks for each question are in brackets
- Read each question fully
- Don't spend too much time on one question

# Good luck!

**Q1.** Which one of the following materials is an alloy?

- A**      Copper
- B**      Zinc
- C**      Brass

**Q2.** How are particles bonded together in metals?

- A**      Covalent bonds
- B**      Attractive forces between positive and negative ions
- C**      Attractive forces between atoms and delocalised electrons

**Q3.** What is an alloy?

- A**      A mixture of 2 or more elements, where at least 1 is a metal
- B**      A mixture of 3 or more elements, where at least 1 is a metal
- C**      A compound of 2 or more elements where at least 1 element is a metal

**Q4.** Which of these statements about alloys is correct?

- A**      Most alloys are less useful than the individual elements that they are made from
- B**      Most alloys are harder than the individual elements that they are made from
- C**      Most alloys are softer than the individual elements that they are made from

**Q5.** Which of these materials is an alloy?

- A**      Steel
- B**      Iron
- C**      Aluminium

**Q6.** Carbon steel is made from carbon and which other material?

- A**      Copper
- B**      Iron
- C**      Brass

**Q7.** Which one of the following is iron alloyed with to make mild steel?

- A**      Zinc
- B**      Carbon
- C**      Aluminium

**Q8.** Which one of the following not an alloy?

- A**      Solder
- B**      Bronze
- C**      Nickel

## **Answers**

**Q1. C**

**Q2. C**

**Q3. A**

**Q4. B**

**Q5. A**

**Q6. B**

**Q7. B**

**Q8. C**