

Materials (KS3)

Section A – Recall (1–2 marks each)

Q1 (1 mark)

What is the reactivity series?

Q2 (1 mark)

Which metal is more reactive, magnesium or copper?

Q3 (1 mark)

What is a metal oxide?

Q4 (1 mark)

What is a composite material?

Q5 (2 marks)

State TWO properties of ceramics.

Q6 (2 marks)

State TWO properties of polymers.

Q7 (2 marks)

State TWO properties of composites.

Section B – Understanding (2–3 marks each)

Q8 (2 marks)

Explain why some metals are more reactive than others and give examples of metal reactions where this is shown

Q9 (3 marks)

Explain how carbon can be used to extract metals from metal oxides.

Q10 (3 marks)

Explain why ceramics are useful materials. Include an example of use.

Q11 (2 marks)

Explain why composites are often stronger than pure materials.

Section C – Application (4 marks each)

Q12 (4 marks)

A student at *Learntit* heats copper oxide with carbon. Explain what happens during the reaction.

Q13 (3 marks)

Explain why aluminium is extracted by electrolysis instead of using carbon.

Q14 (4 marks)

Explain why polymers are used to make plastic bottles.

Q15 (4 marks)

Explain why carbon fibre is used in bicycles and racing cars.

Section D – Extended Response (6 marks each)

Q16 (6 marks)

Explain the reactivity series and how carbon is used to obtain metals from metal oxides.

Q17 (6 marks)

Explain the properties and uses of ceramics, polymers and composites.

Total: ____ / 47
Percentage: ____%