

Q1 (1 mark)

- A process where new substances are formed

Q2 (1 mark)

- Atoms are rearranged

Q3 (1 mark)

- A reaction with oxygen releasing energy

Q4 (1 mark)

- Gain of oxygen (or loss of electrons)

Q5 (2 marks)

Any two:

- Colour change
- Gas produced
- Temperature change
- Precipitate formed

Q6 (2 marks)

Any two:

- Carbon dioxide
- Water

Q7 (2 marks)

Any two e.g.

- pH below 7
- Turns blue litmus red
- Reacts with metals

Q8 (2 marks)

Any two e.g.

- pH above 7
- Turns red litmus blue
- Neutralises acids

Q9 (2 marks)

Any two e.g.

- Litmus
- Universal indicator

Q10 (2 marks)

Any two:

- Salt
- Hydrogen

Q11 (2 marks)

Any two:

- Salt
- Water

Q12 (3 marks)

- Magnesium + hydrochloric acid → magnesium chloride + hydrogen (3)

Q13 (3 marks)

- Sulfuric acid + sodium hydroxide → sodium sulfate + water (3)

Q14 (4 marks)

- Methane + oxygen → carbon dioxide + water (complete)
- Methane + oxygen → carbon monoxide + water (incomplete)

Q15 (3 marks)

- Calcium carbonate → calcium oxide + carbon dioxide (3)

Q16 (3 marks)

- More reactive element replaces less reactive one (1)
- Happens in a compound/solution (1)
- New substances formed (1)

Q17 (3 marks)

- Indicators change colour (1)
- pH scale measures acidity/alkalinity (1)
- Acids below 7 and alkalis above 7 (1)

Q18 (3 marks)

- Speeds up reaction (1)
- Helps reaction happen more easily (1)
- Not used up in reaction (1)

Q19 (4 marks)

- Zinc reacts with hydrochloric acid (1)
- Hydrogen gas produced (1)
- Zinc chloride formed (1)
- Zinc + hydrochloric acid → zinc chloride + hydrogen (1)

Q20 (4 marks)

- Nitric acid reacts with potassium hydroxide (1)
- Neutralisation occurs (1)
- Potassium nitrate and water formed (1)
- Nitric acid + potassium hydroxide → potassium nitrate + water (1)

Q21 (3 marks)

- Copper oxide loses oxygen (1)
- Carbon gains oxygen (1)
- Copper and carbon dioxide formed (1)

Q22 (4 marks)

- Iron more reactive than copper (1)
- Iron displaces copper (1)
- Iron sulfate formed (1)
- Copper produced (1)

Q23 (4 marks)

- Copper carbonate heated (1)
- Compound breaks down (1)
- Copper oxide formed (1)
- Carbon dioxide formed (1)

Q24 (6 marks)

- $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$ (2)

- $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$ (2)
- $\text{H}_2\text{SO}_4 + 2\text{NaOH} \rightarrow \text{Na}_2\text{SO}_4 + 2\text{H}_2\text{O}$ (2)