

# Revision Sheet

## IGCSE Chemistry · Unit 6 Chemical reactions

11 vocabulary items · 35 marks of exam questions (13 questions)

*Part 1 · Vocabulary review answer key. Section A wants the exact English spelling.*

| Question | Answer           | Marks |
|----------|------------------|-------|
| 1        | rate of reaction | 1     |
| 2        | forward reaction | 1     |
| 3        | collision theory | 1     |
| 4        | catalyst         | 1     |
| 5        | equilibrium      | 1     |
| 6        | Contact process  | 1     |
| 7        | iron             | 1     |
| 8        | sulfur           | 1     |
| 9        | oxidation number | 1     |
| 10       | oxidising agent  | 1     |
| 11       | reducing agent   | 1     |

**Multiple Choice Answers**

Q12: A

Q13: D

Q14: B

Q15: D

**Multiple Choice Answers**

Q16: D

Q17: C

Q18: C

Q19: C

**Multiple Choice Answers**

Q20: C

Q21: D

Q22: A

|            |                                                                                                                                                                                                                                                                                                                                                                                         |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 23(a)      | <i>test:</i> relights<br><b>AND</b><br><i>observations:</i> a glowing splint                                                                                                                                                                                                                                                                                                            |
| 23(b)(i)   | lower gradient (at t <sub>2</sub> )                                                                                                                                                                                                                                                                                                                                                     |
| 23(b)(ii)  | <b>M1</b> concentration (of H <sub>2</sub> O <sub>2</sub> particles) decreases (1)<br><b>M2</b> frequency of collisions between particles decreases (1)                                                                                                                                                                                                                                 |
| 23(b)(iii) | <b>M1</b> steeper curve which does not cross original curve and levels off before the original curve (1)<br><b>M2</b> finishes at same volume (1)                                                                                                                                                                                                                                       |
| 23(c)      | <b>M1</b> mol O <sub>2</sub> = 72 / 24000 = 0.003(00) (1)<br><b>M2</b> mol H <sub>2</sub> O <sub>2</sub> = M1 × 2 = 0.002 × 2 = 0.006(00) (1)<br><b>M3</b> conc H <sub>2</sub> O <sub>2</sub> = M2 × 1000 / 20 = 0.006 × 1000 / 20 = 0.3(00) (1)<br><b>M4</b> M <sub>r</sub> H <sub>2</sub> O <sub>2</sub> = 34 (1)<br><b>M5</b> = M4 × M3 = 34 × 0.3 = 10.2 (g / dm <sup>3</sup> ) (1) |
| 23(d)      | any transition metal oxide                                                                                                                                                                                                                                                                                                                                                              |

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 24(a)      | <b>M1</b> the rate of forward reaction equals (the rate of the) reverse reaction (1)<br><b>M2</b> the concentrations of reactants and products are no longer changing (1)                                                                                                                                                                                                                                                                                |
| 24(b)(i)   | <b>M1</b> concentration decreases (1)<br><b>M2</b> position of equilibrium shifts to left <b>AND</b> fewer moles of gas on left hand side (1)                                                                                                                                                                                                                                                                                                            |
| 24(b)(ii)  | <b>M1</b> concentration increases (1)<br><b>M2</b> position of equilibrium shifts to the right <b>AND</b> forward reaction is endothermic (1)                                                                                                                                                                                                                                                                                                            |
| 24(b)(iii) | <b>M1</b> no change (1)<br><b>M2</b> catalysts do not affect position of equilibrium (1)                                                                                                                                                                                                                                                                                                                                                                 |
| 24(c)(i)   | carbon dioxide                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 24(c)(ii)  | <b>M1</b> greenhouse gases absorb thermal energy (from the Earth) (1)<br><b>M2 and M3</b> one mark each for any two of: <ul style="list-style-type: none"><li>• energy (from the sun) absorbed by Earth's surface</li><li>• Earth emits or reflects thermal energy</li><li>• (greenhouse gases) reduces or stops thermal energy loss (into space)</li><li>• increasing in amount of greenhouse gas results in a higher atmospheric temperature</li></ul> |