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SUMMATIVE ASSESSMENT – TERM II, 2026–27

CHEMISTRY – ANSWER KEY (English Medium)

SET 2

Standard: IX **Time: 1½ Hours**

Total Score: 40

Scores for each part are shown in brackets. Accept any other correct answer or explanation.

Q. No.	Answer / Scoring indicators	Score
1	c) Triple covalent bond	1
2	a) Both are true, and the reason explains the statement.	1
3	b) ii and iii are correct	1
4	a) i – z, ii – x, iii – y	1
5	a) Mg loses 2 electrons; Cl gains 1 electron (1) b) $MgCl_2$ (1)	2
6 A	a) Polar; the electronegativity difference (1.24) is significant, so the shared pair shifts towards oxygen (1) b) Oxygen (1)	2
6 B	Ionic: formed by transfer of electrons, high melting point, conduct electricity in molten/solution state, usually soluble in water. Covalent: formed by sharing, low melting point, generally do not conduct (any two differences) (2)	2
7	a) $+1 + x + 3(-2) = 0 \rightarrow x = +5$ (1) b) $+1 + x + 4(-2) = 0 \rightarrow x = +7$ (1)	2
8 A	a) CuO (1) b) H_2 (1)	2
8 B	a) $Cu^{2+} + 2e^- \rightarrow Cu$ (1) b) The blue colour fades; Cu^{2+} ions are reduced to copper metal (1)	2
9	a) Surface area (size of particles) (1) b) Smaller pieces expose more surface to oxygen, so more collisions take place (1)	2
10	Salt = 4% of 250 = 10 g (1); water = 240 g (1)	2
11	a) 2, 8, 8, 2 (1) b) Group 2, Period 4 (1)	2
12	a) Potassium nitrate (1) b) 110 g per 100 g of water (1) c) Its solubility changes very little with temperature, so very little crystallises on cooling (1)	3
13	a) Concentrated acid (1) b) More acid particles per unit volume, so more effective collisions (1) c) Hydrogen (1)	3
14 A	a) +3 (1) b) Aluminium (1) c) Welding of railway tracks / broken machine parts (1)	3
14 B	a) $Mg \rightarrow Mg^{2+} + 2e^-$ (1) b) $Cl_2 + 2e^- \rightarrow 2Cl^-$ (1) c) Oxidation and reduction take place at the same time (1)	3
15	a) Iron (finely divided) (1) b) It increases the rate of reaction without being used up (1)	3

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	c) Amylase (ptyalin) / pepsin / any correct enzyme (1)	
16	a) O=C=O with two shared pairs between C and each O (1) b) Two (1) c) Two lone pairs (1)	3
17 A	a) (5 ÷ 100) × 100 = 5% (1) b) (0.5 ÷ 10^6) × 10^6 = 0.5 ppm (1) c) A solution with a small amount of solute in a large amount of solvent (1)	3
17 B	a) A solution that cannot dissolve any more solute at that temperature (1) b) Add more copper sulphate; evaporate some water; cool the solution (any two) (2)	3
18 A	a) A: 2, 8, 8, 1; B: 2, 6 (1) b) A loses 1 electron; B gains 2 electrons (1) c) A_2B (1) d) Ionic bond (1)	4
18 B	a) With 2 M acid (1) b) Rate increases with concentration (1) c) More particles in the same volume lead to more effective collisions per second (1) d) $CaCO_3 + 2HCl \rightarrow CaCl_2 + H_2O + CO_2$ (1)	4

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