

SECOND YEAR HIGHER SECONDARY EXAMINATION MARCH 2017

SUBJECT : CHEMISTRY

CODE. NO: 5016

Qn No	Sub Qns	Answer Key/Value Points	Score	Total
1	a	Metal deficiency defect	1	4
	b.	Ferromagnetic substance	1	
		diagram or explanation of ferromagnetic or ferrimagnetic	1	
	c	diagram or explanation of conductor or insulator	1	
2.	a (i)	statement or mathematical expression	1	4
	(ii)	One application	1	
	b.	$M_2 = \frac{W_2 RT}{\pi V}$ Correct substitution	1	
3.	a	$\text{Cu}_{(s)} \text{Cu}^{2+}_{(aq)} \text{Ag}^+_{(aq)} \text{Ag}_{(s)}$ or diagram	1	4
	b.	$2 \text{Ag}^+ + 2e^- \rightarrow 2 \text{Ag} \text{ (Cathode rxn) } \frac{1}{2}$ $\text{Cu}_{(s)} \rightarrow \text{Cu}^{2+}_{(aq)} + 2e^- \text{ Anode rxn } \frac{1}{2}$	1	
	c.	Equation	1	
		substitution	1	
		Correct substitution without eqn	2	
		Correct answer only	1	

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Qn No	Sub Qns	Answer Key/Value Points	Score	Total
4	a	graph	2	4
	b	definition or equation or example	2	
	c	Correct equation substitution	1 1	
5	a	Two differences between physisorption and chemisorption	2	3
	b	One application	1	
6		Definition of leaching	1	3
		Explanation of leaching or	3	
		Equations (3 steps) - (one mark for each step)	3	
7	a	N_2O	1	5
	b	One method of preparation	2	
		Two chemical properties	2	
		Two uses	2	
		Ostwald process (name only)	1	
	a	PH_3	1	
	b	One method of preparation of PCl_3 or PCl_5	2	
One chemical property of PCl_3 or PCl_5		2		

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		Draw the structure of PCl_3 or PCl_5 2		
8	(i) Two properties - (Name or explanation) 2 (ii) For Cr^{2+} , configuration changes from d^4 to d^3 or Mn^{3+} to Mn^{2+} , d^5 configuration results in extra stability (half filled configuration) or Configuration of Cr^{3+} or Mn^{2+}		1	4
	b. Thorium		1	
9	a. Ionisation isomerism b. (i) Penta ammine sulphato cobalt (III) chloride (ii) Penta ammine chlorido cobalt (III) sulphate (Chloro)		1 2 2	4
	c. Name or formula of two ligands		1	
10	a. Nitrite ion b. (i) One method of preparation (ii) One reason - (No need of explanation)		1 1 2	4

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11	a	Ethanol < propan-1-ol < buten-2-ol < buten-1-ol (correct order only)	1	4
	b	Name of one product or one eqn. if write 'No' only (1)	3	
12	a	Benzaldehyde	1	5
	b(i)	$KMnO_4$ or oxidation or one oxidising agent (2)	4	
	(ii)	Ammonolysis or reaction with NH_3 (2)		
	(iii)	Reduction or reducing agent (2)		
	(iv)	P_2O_5 or heating or dehydrating agent (2)		
	b	Reaction or explanation of		
	(i)	Esterification (2)		
	(ii)	Tollen's test (2)		
	(iii)	HVZ reaction (2)		
	(iv)	Decarboxylation of carboxylic acid (2)		
13	a	Two correct answer	1	3
	b	Name or formula of B or C	2	
14	a	Cellulose	1	3
	b	Zwitter ion / explanation / structure	2	

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Qn No	Sub Qns	Answer Key/Value Points	Score	Total
15	a	Addition polynomials	1	3
	b.	Definition or one difference or one example each	2	
16		Explain any one One example	2	3

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