Model Paper Chemistry Objective

Intermediate Part – I (11th Class) Examination Session 2015-2017 and onward

Total marks: 17 Paper Code_____ Time Allowed: 20 minutes

Note:- You have four choices for each objective type question as A, B, C and D. The choice which you think is correct: fill that circle in front of that question number. Use marker or pen to fill the

circles. Cutting or filling two or more circles will result in zero mark in that question D Question Q.No В A Empirical formula of Glucose 1 C₂HO CH₂O CHO₂ C_2H_2O The number of molecules 9.03×10^{23} 3.01×10^{23} 6.02×10^{23} 1.20×10^{24} 2 present in 9.0 gm of pure water are The drying agent used in a Lithium Sodium Potassium Calcium 3 desiccator is Chloride Chloride Chloride Chloride The highest temperature at Critical Transition 4 which a substance can exist as Absolute Consolute Temperature Temperature liquid, is called its The boiling point of water at 5 69°C 74°C 79°C 84°C Mount Everest is The existence of an element in 6 more than one crystalline Isotropy Aniosotropy **Entropy** Allotropy forms is known as The Scientist Chadwick in 7 Proton Neutron Electron Positron 1932 discovered The values of Quantum 8 n = 1, 1 = 1n = 3, 1 = 2n = 2, 1 = 1n = 3, e = 1numbers for 3P orbital are The compound which follows 9 PF₅ SF_6 $BC\ell_3$ $NaC\ell$ octect rule for bonding is The Highest percentage of 10 HF HBr HI $HC\ell$ ionic character is in The amount of heat absorbed when one mole of gaseous Enthalpy of Enthalpy of Enthalpy of Enthalpy of 11 atoms are formed from the Formation atomization reaction combustion element under standard conditions is called In Haber's process, the Increasing Increasing Increasing Decreasing maximum yield of ammonia 12 Pressure pressure temperature volume can be obtained by The salt dissolved in water 13 forms a solution with pH Na₂CO₃ CuSO₄ $NaC\ell$ $NH_4C\ell$ greater than 7 is The elevation of boiling point 0.0052°C 14 0.052°C 0.52°C 5.2°C of 0.1 molal solution is The oxidation number of 15 -1-2+ 1 + 2 Oxygen in OF₂ is In Lead Accumulator cell, the 20 % H₂SO₄ 30 % H₂SO₄ 40 % H₂SO₄ 50 % H₂SO₄ 16 electrolyte used is Sucrose is converted into 17 Glucose and fructose by Invertase Maltase Urease Zymase enzyme catalyst called

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Model Paper Chemistry Subjective

Intermediate Part – I (11th Class) Examination Session 2015-2017 and onward

Total marks: 68 Time: 2:40 hours

SECTION ----- I

2. Answer any Eight parts from the followings:-

 $8 \times 2 = 16$

- (i) The removal of an electron from a neutral atom is an endothermic process. Explain with reason.
- (ii) Actual yield is always less than theoretical yield. Give two reasons.
- (iii) Calculate the no. of molecules present in 34 g of H₃PO₄.
- (iv) Solvent extraction ferns the Distribution Law. Justify.
- (v) Define sublimation. Give one example.
- (vi) Calculate the value of General Gas constant in SI units.
- (vii) Pilots feel uncomfortable breathing at higher attitude. Give reason.
- (viii) Gases deviate from ideal behaviour at low temperature and high pressure. Give reasons.
- (ix) Table salt is an insulator in solid state. Justify.
- (x) Liquid crystals can be used in diagonosis of Cancer. Explain.
- (xi) Evaporation is a cooling process. Give reason.
- (xii) Graphite has slippery touch. Give reason.

3. Answer any Eight parts from the followings:-

 $8 \times 2 = 16$

- (i) Positive rays are also called canal rays. Give reason.
- (ii) The radius of first orbit of hydrogen atom is 0.529 A°. Calculate the radius of 3rd orbit of hydrogen atom.
- (iii) Explain stark effect.
- (iv) Pressure can effect the production of Cathode Rays.
- (v) Dipole moment of CO₂ is zero. While that of H₂O is 1.85 D. Explain.
- (vi) Explain the geometry of H₂Se molecule.
- (vii) Electronegativity increases from left to right in periodic table. Give reason.
- (viii) Sketch the molecular orbital picture of O₂.
- (ix) Enthalpy is a state function. Justify.
- (x) Born Haber's Cycle is another form of Hess's Law. Justify.
- (xi) Buffers are important in many areas of Chemistry. Justify.
- (xii) Define Le-Chatelier's principle.

4. Answer any Six parts from the followings:-

 $6 \times 2 = 12$

- (i) Give the applications of the solubility product.
- (ii) Depression of freezing point is a colligative property. Justify.
- (iii) Na₂SO₄ . 10H₂O shows discontinuous solubility curve. Give reason.
- (iv) What is the molality of a solution prepared by dissolving 5 g of Glucose in 250g of water.
- (v) Electromotive force can be calculated from electrochemical series. Explain with reason.
- (vi) Lead accumulators is a chargeable battery. Comment.
- (vii) Calculate the oxidation number of chromium in; (a) K_2CrO_4 (b) $K_2Cr_2O_7$
- (viii) Differentiate between average and instantaneous rate of reaction.
- (ix) Explain auto-catalysis.

(**P.T.O.**)

SECTION ----- II

<u>Note</u> :	Attempt any three questions.	$(8 \times 3 = 24)$	
5.(a)	What are London forces. Explain various factors affecting it.		4
(b)	Mg reacts with HC ℓ to give hydrogen gas. What is the minimum volume of H (27 % by weight) required to produce 16.1g of H ₂ . The density of HC ℓ solution Mg _(s) + 2HC ℓ (aq) \rightarrow MgC ℓ _{2(aq)} + H _{2(g)}	n is 1.14 g/c	
6. (a)	What is hybridization? Explain Sp ² hybridization with example.	,	4
(b)	State first law of thermodynamics and prove that $\triangle E = q_v$		
7.(a)	What is Plasma? How is it produced? Give its two applications.		4
(b)	Describe Milikian's Oil Drop method for the measurement of charge of an elec-	etron.	4
8. (a)	What is Standard Hydrogen Electrode (SHE)? How is it used for the		
	measurement of electrode potential.		4
(b)	Calculate the pH of a buffer solution in which 0.11 M $$ CH ₃ COONa and 0.09 M acetic acid solutions are present. $$ Ka for CH ₃ COOH is 1.85×10^{-5} .		4
9. (a)	Explain Roult's Law when both components are volatile.		4
(b)	Define order of reaction. How does half life method can be used for its determ	nination.	4

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