

## CHEMISTRY (NEW COURSE)

## GROUP FIRST

ACADEMIC SESSION : 2015 - 2017 TO 2017 - 2019

TIME: 20 MINUTES

MARKS: 17

OBJECTIVE

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.

QUESTION NO. 1

- 1 The volume occupied by 1.4 g of N<sub>2</sub> at STP is  
(A) 2.24 dm<sup>3</sup> (B) 22.4 dm<sup>3</sup> (C) 1.12 dm<sup>3</sup> (D) 112 cm<sup>3</sup>
- 2 27 g of Al will react completely with how much mass of O<sub>2</sub> to produce Al<sub>2</sub>O<sub>3</sub>  
(A) 8 g of oxygen (B) 16 g of oxygen (C) 32 g of oxygen (D) 24 g of oxygen
- 3 Insoluble particles can be separated from liquid by  
(A) Sublimation (B) Solvent extraction (C) Crystallization (D) Filtration
- 4 If absolute temperature of a gas is doubled and pressure is reduced to one half, the volume of gas will  
(A) Remain unchanged (B) Increase four times (C) Reduce to  $\frac{1}{4}$  (D) Be doubled
- 5 Dipole-induced dipole forces are also called  
(A) London Dispersion Forces (B) Debye Forces (C) Hydrogen bonding (D) Huckel Forces
- 6 The molecules of CO<sub>2</sub> in dry ice form  
(A) Ionic crystals (B) Covalent crystals (C) Molecular crystals (D) Any type of crystals
- 7 Which of the hydrogen halides has the highest percentage of ionic character?  
(A) HCl (B) HBr (C) HF (D) HI
- 8 Quantum number values for 2p orbitals are  
(A)  $n=2, \ell=1$  (B)  $n=1, \ell=2$  (C)  $n=1, \ell=0$  (D)  $n=2, \ell=0$
- 9 Splitting of spectral lines when atoms are subjected to strong electric field is called  
(A) Zeeman effect (B) Stark effect (C) Compton effect (D) Photoelectric effect
- 10 Geometry of SO<sub>2</sub> molecule is  
(A) Linear (B) Angular (C) Tetrahedral (D) Trigonal pyramidal
- 11 For the reaction:  $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$ , the change in enthalpy is called  
(A) Heat of reaction (B) Heat of formation (C) Heat of neutralization (D) Heat of combustion
- 12 The solubility product of AgCl is  $2.0 \times 10^{-10} \text{ mol}^2 \text{ dm}^{-6}$ . The maximum concentration of Ag<sup>+</sup> ions in the solution is  
(A)  $2.0 \times 10^{-10} \text{ mol dm}^{-3}$  (B)  $1.41 \times 10^{-5} \text{ mol dm}^{-3}$   
(C)  $1.0 \times 10^{-10} \text{ mol dm}^{-3}$  (D)  $4.0 \times 10^{-20} \text{ mol dm}^{-3}$
- 13 The values of K<sub>w</sub> of water at 25 °C is  
(A)  $0.11 \times 10^{-14}$  (B)  $0.30 \times 10^{-14}$  (C)  $1.0 \times 10^{-14}$  (D)  $7.5 \times 10^{-14}$
- 14 Which one of the following salt dissolves in water to form a solution with a pH greater than 7?  
(A) NaCl (B) CuSO<sub>4</sub> (C) Na<sub>2</sub>CO<sub>3</sub> (D) NH<sub>4</sub>Cl
- 15 18 g of glucose is dissolved in 90 g of water. The relative lowering of vapour pressure is equal to  
(A)  $\frac{1}{5}$  (B) 5.1 (C)  $\frac{1}{51}$  (D) 6
- 16 Stronger the oxidizing agent, greater is the  
(A) Oxidation potential (B) Reduction potential (C) Redox potential (D) E.M.F. of cell
- 17 If the rate equation of a reaction  $2A + B \rightarrow \text{products}$  is,  $\text{rate} = k[A]^2[B]$ , and A is present in large excess, then order of reaction is  
(A) 1 (B) 2 (C) 3 (D) Zero



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