Half yearly Examination

Class X1 Chemistry
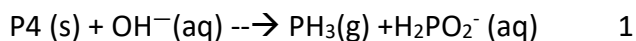
Part A

MM 18   time 40 min

Short questions answer –

Q 1 Balance the following equation in basic medium by ion electron method

P_4 (s) + OH^-(aq) --→ PH_3(g) +$H_2PO_2^-$ (aq)   1

Q 2Make structure of a)5- sec butyl -4-isopropyldecane b) tetra – tert butyl methane 2

Q 3 A certain particle carries 2.5 x 10^{-16} C of static electric charge . Calculate number of

electrons present in it .   2

Q 4 Draw resonating structure of $C_6 H_5$ CHO   1

Q 5 Make Lewis dot structure of nitrite ion   1

Q 6 Calculate mole fraction of benzene in a solution containing 30 % by mass of it in carbon

tetrachloride .   2

Q 7 Name and write formula of most versatile reducing agent   1

Multiple choice questions ---

Q 8 A measured temperature on Fahrenheit scale is 200 ^{0} F what will this reading be on Celsius

scale a)40 ^{0}C b)93.3 ^{0}C c) 94 ^{0}C d) 30 ^{0}C

Q 9 What is the maximum number of orbitals that can be identified with the following quantum

numbers n= 3 , l = 1 , ms = 0 a)1 b)2 c) 3 d) 4

Q 10 How many spherical nodes are present in 4s orbital in a hydrogen atom

a) 0 b)2 c) 3 d) 4

Q 11 Which of the following is an electron precise hydride a) $B_2 H_6$ b)NH_3 c)H_2O d) CH_4

Q 12 Only one element of -------- forms hydride a)Group 6 b) Group 7 c) Group 8 d) Group 9

Q 13 The IUPAC name of tertiary butyl chloride is a) 4- chlorobutane b) 2-chlorobutane

c) 1-chloro-3-methyl propane d) 2- chloro -2-methylpeopane

Q 14 Alicyclic compounds are a)Hetero cyclic compounds b) Aromatic compounds c) Aliphatic

Compounds d) None of these

Q 15 The family of elements with the highest ionization enthalpy a) alkaline earth metals

b)halogens c) noble gases d) alkali metals

Q 16 What type of hybridization is possible in square planer molecule a)Sp3d b)dSp3

c)dSp2 d) sp3d2

Q 17 The calculated bond order in O_2^- is a)1   b) 1 ½ c)2 d) 2 ½   1 X10 - 10

Part B

Chemistry X1

Short answer type questions –

Q 18 Write a disproportionation reaction of fluorine with water   1

Q 19 Give an example of formula in which molecular weight is two times empirical formula weight 1

Q20 Write chemical reactions to show water Is amphoteric in nature 2

Q 21give condensed and bond line formula of 2- hydroxyl- 1,2,3- propantricarboxylic acid and Hexanedial   2

Q 22 How are frequency and wave number are related to each other ?   1

Multiple choice questions –

Q 23 The molarity of NaOH solution obtained by dissolving 4 g of it in 250 ml is a).4 M b).8 M c).2 M

     d) .1 M

Q 24 IF uncertainty in the position of an electron is zero the uncertainty in momentum would be

      a)zero   b)≥ h/ 4π   c) < h/4π   d) infinite

Q 25 When zeolite is treated with hard water the sodium ions are exchanged with a) H^+ ion

       b) Ca^{2+} ions   c) $SO4^{2-}$ ion d) Mg^{2+}

Q 26 CO is isostructural with a)$HgCl_2$ b)C_2H_2 c) $SnCl_2$ d) NO_2 1 x4 = 4

Assertion reason type question --

a)If A and R both are true and R is correct explanation of A   b)If both A and R are true but R is not

    correct explanation of A c) A is true but R is false d)if A is false R is true

Q 27 Assertion - Electromeric effect is brought into play only at the requirement of reagent

       Reason – It is temperory effect in which bond pair is shifted to one of the constituent atoms

Q 28 Assertion – The first ionization energy of Be is greater than B

       Reason – 2p orbital is higher in energy than 2S orbital

Q 29 Assertion – Ionic compounds tend to non volatile

Reason – The intermolecular forces in these compound are weak

Q 30 Assertion –Photoelectric effect is given by caesium metal

Reason- Photoelectric effect is given by metals having high ionization energy   1X4 = 4