LAMARTINIERE FOR BOYS

REHEARSAL EXAMINATION I - 2021-22

CHEMISTRY

CLASS – X

Maximum Marks : 40

Time allowed : One hour (inclusive of reading time)

ALL QUESTIONS ARE COMPULSORY

The marks intended for questions are given in brackets [ ]

Select the correct option for each of the following questions .

The correct option to the following questions are to be hand written , scanned and send in PDF form to the sectionwise email IDS as given below . Please mention your name ,class , section and roll no. on top of your answerscript .

10A – lamartinierechem10a@gmail.com

10A1 – LMBchem10a1@gmail.com

10L – LMBchem10l@gmail.com

10L1 – lamartinierechem10l1@gmail.com

Question 1

The power of an atom to attract bonded pair of electrons towards itself is known as [1]

(A) Electro negativity (B) Electron affinity

(C) Polarity (D) Oxidation power

Question 2

Nitrogen molecule is inert under ordinary conditions because of [1]

(A) double covalent bond (B) strong electrovalent bond

(C) triple covalent bond (D) none of these

Question 3

The indicator which is colourless in neutral and acidic medium is [1]

(A) Methyl orange (B) Litmus solution .

(C) Phenolphthalein (D) Methyl red

Question 4

The compound which is an example of a weak electrolyte is [1]

(A) $NaNO_3$ (B) NH_4OH

(C) KOH (D) HNO_3

Question 5

At the anode during electrolysis the following reaction occurs [1]

(A) Reduction (B) Redox

(C) Oxidation (D) Precipitation

Question 6

The empirical formula of acetic acid (CH_3COOH) is c2h4o2==ch2o [1]

(A) $C_2H_4O_2$ (B) C_2H_2O

(C) CH_4O (D) CH_2O

Question 7

The cation which will be preferentially discharged at cathode during electrolysis is [1]

(A) K^+ (B) Ag^+

(C) Cu^{2+} (D) Na^+

Question 8

The smallest atom among the following is [1]

(A) Na (B) K

(C) F (D) C

Question 9

A compound which during electrolysis in its molten state liberates a reddish brown gas at the anode is [1]

(A) Sodium Chloride (B) Copper(II)oxide

(C) Copper(II)sulphate (D) Lead(II)bromide . bromine gas

Question 10

The masses of gas X and hydrogen that the same cylinder can hold under identical conditions are 80g and 4 g respectively, The RMM of gas X is [1]

(A) 40 (B) 20 V.D=80/4=20
RMM---20X2=40

(C) 80 (D) 160

Question 11

The name of the bond formed when ammonia bonds with a proton to form ammonium ion is other name for coordinate covalent bond [1]

(A) Dative bond . (B) Polar covalent bond .

(C) Covalent bond . (D) Electrovalent bond .

Question 12

The reagent that can be used to chemically distinguish between Lead nitrate and Zinc nitrate solution is [1]

(A) NaOH (B) $BaCl_2$

(C) $AgNO_3$ (D) NH_4OH

Question 13

The elements having highest electronegativity and highest ionization energy in the Periodic table are [1]

(A) F, K (B) F , He

(C) He, F (D) Cl, Li

Question 14

Which of the following is not a property of Sodium choride?

(A) high melting point (B) ionizes in aqueous solution

(C) soluble in water (D) conducts electricity in molten state [1]

Question 15

Glucose in aqueous solution contains [1]

(A) only ions (B) only molecules

(C) ions as well as molecules (D) does not dissolve in water

Question 16

If a hydrocarbon contains 20% hydrogen, the empirical formula of the hydrocarbon will be (At. wt. of H = 1 , C = 12) [1]

(A) CH_5 (B) C_6H_{13}

(C) C_2H_6 (D) CH_3

Question 17

In the electroplating of an article with Nickel the factor which decides the deposition of Nickel on the article is [1]

(A) lower concentration of Nickel ions in solution .

(B) higher position of Nickel than Hydrogen in the electrochemical series

(C) higher concentration of Nickel ions in the solution

(B) higher concentration of hydroxyl ions in solution

Question 18

Carbonic acid is a [1]

(A) Weak dibasic acid (B) Weak monobasic acid

(C) Strong monobasic acid (D) Strong dibasic acid .

Question 19

Phosphoric acid (H_3PO_4) with NaOH can form [1]

(A) Three acid salts

(B) Two normal salt and one acid salt

(C) Three normal salts

(D) One normal salt and two acid salt

Question 20

The percentage by mass of oxygen in Na_2CO_3 is [1]

(A) 44.28%

(B) 46.12%

(C) 45.28%

(D) 21.69%

Question 21

Methyl orange is

(A) Pink in acidic medium, yellow in basic medium [1]

(B) Yellow in acidic medium, pink in basic medium.

(C) Colourless in acidic medium, pink in basic medium.

(D) Pink in acidic medium, colourless in basic medium .

Question 22

An element has an atomic number of 15 with which of the following elements will it show similar chemical properties [1]

(A) Be (at.no. 4)

(B) Ne (at.no. 10)

(C) N (at.no. 7).

(D) O (at.no. 8)

Question 23

The group number and period number respectively of an element with atomic number 8 is [1]

(A) 6, 2.

(B)16, 2

(C). 6, 8

(D) 16, 4

Question 24

The particles present in aqueous solution of acetic acid is [1]

(A) H_3O^+ (B) CH_3COO^{1-}

(C) CH_3COOH (D) all of these.

Question 25

In the third period of the periodic table the element having highest electron affinity is [1]

(A) Na (B) Ar

(C) Cl. (D) Si

Question 26

Which electrolyte is used during the electroplating of an article by Silver [1]

(A) Silver nitrate (B) Molten Silver bromide

(C) Molten Silver oxide (D) Sodium argentocyanide

Question 27

The gas evolved when Al metal reacts with hot conc. NaOH solution is [1]

(A) Hydrogen (B) Oxygen

(C) Water vapour (D) None

Question 28

A yellow compound that dissolves in hot concentrated alkali is [1]

(A) Lead(II)hydroxide (B) Magnesium oxide

(C) Lead(II)oxide (D) Lead (IV) oxide

Question 29

The correct method used for the preparation of $ZnCO_3$ from $ZnSO_4$ is [1]

(A) Simple displacement (B) Neutralization

(C) Combination (D) Precipitation .

Question 30

Ionisation potential increases across a period from left to right because the [1]

(A) atomic radius increases and nuclear charge increases .

(B) atomic radius decreases and nuclear charge decreases

(C) atomic radius increases and nuclear charge decreases

(D) atomic radius decreases and nuclear charge increases

Question 31

The observation when ammonium chloride reacts with potassium hydroxide [1]

(A) A reddish brown gas

(B) A colourless gas which turns moist red litmus blue.

(C) A green coloured gas which turns moist blue litmus paper red.

(D) A colourless gas which turns lime water milky.

Question 32

A solution having a P^H value 8.1 is an example of [1]

(A) weak acid (B) strong alkali

(C) weak alkali (D) strong acid

Question 33

The colour of the precipitate formed when Ferric ions react with Ammonium hydroxide solution is [1]

(A) Blue. (B) Reddish brown

(C) Dirty green. (D) White

Question 34

The gas liberated when zinc sulphide reacts with dilute sulphuric acid is [1]

(A) Carbon dioxide. (B) Hydrogen

(C) Hydrogen sulphide. (D) Sulphur dioxide

Question 35

Two Organic compounds X and Y containing Carbon and Hydrogen only have vapour densities 13 and 39 respectively . The molecular formula of X and Y will be [1]

(A) C_2H_6 and C_6H_{12} (B) C_2H_4 and C_4H_8

(C) C_2H_2 and C_6H_6 (D) C_4H_{10} and C_5H_{12}

Question 36

The molecule which has presence of polar covalent bond is [1]

(A) Ammonia (B) Oxygen

(C) Calcium oxide (D) Chlorine

Question 37

With reference to the Electrorefining of Copper block answer the following : [4]

(i) the cathode used will be

(A) Thin sheet of Copper containg 5% Tin .

(B) Thin sheet of Pure Copper .

(C) Thin sheet of Copper containing 3% Tin and 2% Lead .

(D) None of the above .

(ii) the anode used will be

(A) Impure Copper block .

(B) Thin sheet of pure Copper .

(C) Thick pure Copper block .

(D) None of the above .

(iii) the electrolyte used should be

(A) Molten Copper bromide .

(B) Lead nitrate solution

(C) tetraammine Copper(II) sulphate solution

(D) Aqueous Copper sulphate solution .

(iv) the anode reaction during the electrorefining will be

(A) $Cu - e$ ------> Cu^{1+}

(B) $Cu^{1+} + e$ ----------> Cu

(C) $Cu - 2e$ ----------> Cu^{2+}

(D) $Cu^{2+} + 2e$ ----------> Cu
