CITY SCHOOL OF EDUCATIONAL INSTITUTE, PANDHURNA

Test (OB) EXAMINATION 2020-21

Class-11th

Subject- Chemistry

Time – 3 hour Max. Mark– 70

1. All questions are compulsory. Chapt. 1,2,3

Q.1-Choose the correct answer- **Marks 10**

1.) What is the mass percent of carbon in corbon dioxide:

a. 0.034 % b. 27.27 %

c. 3.4 % d. 28.7 %

2.) What will be molarity of a solution, which contains 5.85 of $NaCL_{(s)}$ per 500 mL

a. 4 mol l^{-1} b. 20 mol l^{-1}

c. 0.2 mol l^{-1} d. 2 mol l^{-1}

3.) The number of gram atoms of oxygen in 128 gm of oxygen is:

a. 4 b. 8

c. 128 d.8 x 6.023 $x10^{23}$

4.) Automic Number of an element is 11. The nature of its oxide will be.

a. Acidic b. Basic

c. Both (a) and (b) d. Neutral.

5) For n = 3, Values of *I* will be :

a. 1,2,3 b. 0,1,2

c. 0,1,3 d. None of these

Que: 2 Calculate the molecular mass of the following: **Marks 3 X 3**

(i) **H_2O**

(ii) **(ii) CO_2**

(iii) **(iii) CH_4**

Que:3 Calculate the mass of sodium acetate (CH_3COONa) required to make 500 mL of 0.375 molaraqueous solution. Molar mass of sodium acetate is 82.0245 g mol-1 **Marks 05**

Que 4 Chlorine is prepared in the laboratory by treating manganese dioxide (MnO_2) with aqueous hydrochloric acid according to the reaction

$$4HCl_{(aq)} + MnO_{2(s)} \rightarrow 2H_2O_{(l)} + MnCl_{2(aq)} + Cl_{2(g)}$$

How many grams of HCl react with 5.0 g of manganese dioxide? **Marks 05**

Que 5 What is the basic theme of organisation in the periodic table? **Marks 05**

Que 6 **Marks 3 X 4**

(i) Calculate the total number of electrons present in one mole of methane.

(ii) Find (a) the total number and (b) the total mass of neutrons in 7 mg of $_{14}C$. (Assume that mass of a neutron = 1.675 x 10^{-27}kg).

(iii) Find (a) the total number and (b) the total mass of protons in 34 mg of NH_3at STP. Will the answer change if the temperature and pressure are changed?

Que 7: Yellow light emitted from a sodium lamp has a wavelength (ÃŽÂ») of 580 nm. Calculate the frequency (ÃŽÂ½) and wave number (^{v}) of the yellow light. **Marks 06**

Que 8: A 25 watt bulb emits monochromatic yellow light of wavelength of 0.57ÃŽÂ¼m. Calculate the rate of emission of quanta per second **Marks 06**

Que 9 The first ionization enthalpy values (in $kJmol^{-1}$) of group 13 elements are : **Marks 06**

B	Al	Ga	In	Tl
801	577	579	558	589

How would you explain this deviation from the general trend?

Que 10 Use the data given in the following table to calculate the molar mass of naturally occurring *argon* isotopes. **Marks 06**

Isotope	Isotopic molar mass	Abundance
^{36}Ar	35.96755 $gmol^{-1}$	0.337%
^{38}Ar	37.96272 gmol-1	0.063%
^{40}Ar	39.9624 $gmol^{-1}$	99.600%