A

GENERAL EDUCATION DEPARTMENT OFKERALA

E-1006

KANNUR DISTRICT PANCHAYAT - SAMAGRA VIDHYABHYASA PROGRAMME

SMILE-2023-SSLC- MODEL EXAM

Class: X **CHEMISTRY** **Time: 1½ Hrs**

Score: 40

Instructions

- **The first to 15 minutes is cool of time. You may use the time to read and plan your answers.**
- **Answer the questions only after reading the instructions and questions troroughly.**
- **Score and time are to be considered while answering.**

Answer any 4 questions from 1To 5. Each carries one score.

1. Compounds of which block elements are used for giving colour to glassess and in oil paintings? (1)
2. Identify and name the functional group present in the compound CH_3-COOH. (1)
3. Highly concentrated solution of Ammonia is called ..... (1)
4. The electrode which is connected to the negative terminal of the battery is called..... (1)
5. The monomer of natural rubber is..... (1)

Answer any 4 questions from 6 To 10. Each carries 2 Scores.

(4x2=8)

6. Which of the following elements, showing greater stability due to completely filled or half filled 'd' subshells?

   [Fe, Cu, Mn, Cr] (2)
7. 320g oxygen is given Find out

   a) Number of moles?

   b) Number of molecules? (2)
8. $2SO_2+O_2$ □ $2SO_3$+ heat

How do the following conditions influence forward reactions in the above equilibrium reaction?

a) decreasing Pressure

b) Remove SO_3

9. Select the Practical utilities of electrolysis from the list given below

a) Production of plastics.

b) Production of non-metals

c) Purification of water

d) Production of compounds.

10. a). IUPAC Name of an organic compound is 2,2-dimethylpropane. Draw its structure?

b) Find out the Molecular Formula of the above compound?

Answer any 4 questions from 11 To 15. Each question carries 3 Scores.

(4x3=12)

11. The outermust subshell electronic configuration of two elements are given.

P= $3s^2$ Q=$3p^4$

a)Write down the complete sub shell electronic configuration.

b) Find out the valencies

c) Find out the Molecular Formula of the compound formed by the combination of above two elements?

12. Some metals and metal refining methods are listed below match Suitably

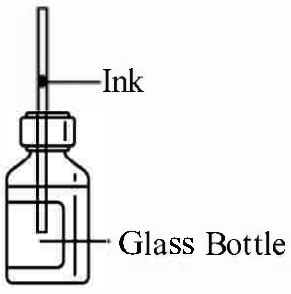
Mercury	Zinc	Copper
liquation	distillation	electrolytic refining

13. Observe the figure A and answer the following questions. (3)

a). Identify the change of inkdrop in the refiller, when the glass bottle is held in your hands for a short while?

b) which law is associated with it. ?

c) State the Law?



14. When Ammonium chloride is taken in a test tube and heated a white powder sticking to the side of the test tube was noticed.

a)whichis the white powdered substance. (1)

b) How to obtain this product? (1)

c) Write down the chemical equation? (1)

15. Industrial preparation of an organic compound is given below. Find out A and B.

a) $C_{12}H_{22}O_{11} + 2H_2O \xrightarrow{A} C_6H_{12}O_6 + C_6H_{12}O_6$

$C_6H_{12}O_6 \longrightarrow ...B.. + 2CO_2$

b) which of the following organic compounds react with **B** to form ester?

$(CH_3-CHO, CH_3-COOH, CH_3-CH_2-CH_2-OH)$

Answer any four questions from 16 to 20. Each questions having 4 Scores

(4x4=16)

16. Find and A,B,C,Din the following chemical Reactions

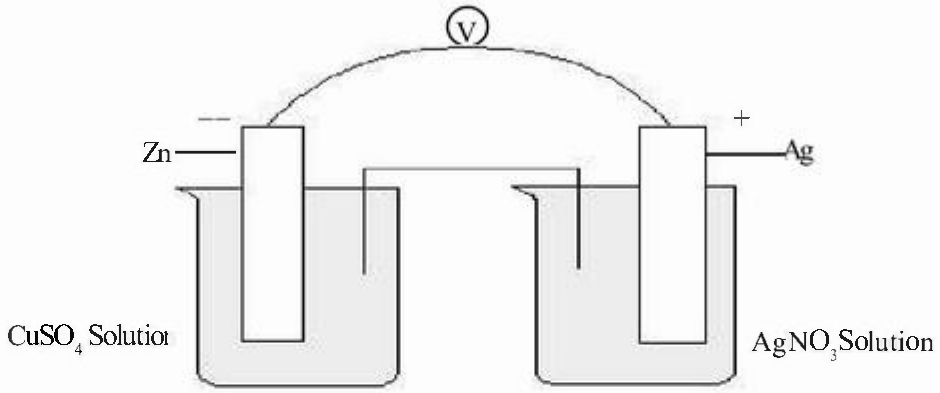
a) $CH_3-CH=CH_2+Cl_2 \longrightarrow \_\_\_\overset{A}{\_}\_\_\_$

b) $\_\_\_\overset{B}{\_}\_\_\_ \xrightarrow{heat} CH_2=CH_2+CH_4$

c) $nCH_2=CH_2 \xrightarrow[heat/pressure]{} \_\_\_\overset{C}{\_}\_\_\_$

d) $D+2O_2 \longrightarrow CO_2 + 2H_2O + heat$

17. Diagram of Galvenic cell is given below.



a) which electrode undergo oxidation?

b) What is the energy changes happening here?

c) write down the name of the reaction in which Oxidation and Reduction taking place simultaniously.?

d)If Ag electrode is replaced by Zn electrode which solution used as an electrolyte? (4)

18. The structure of Alkyne is given below.

$$CH_3-CH_2-CH_2-\underset{\underset{\textstyle CH_2-CH_3}{|}}{CH}-CH_3$$

a) Find out the number of carbon atoms in the longest chain?

b) Mention the Position of the branch ?

c) Name the branch ?

d) Write down the IUPAC name?

19. Two Compounds of manganese are given below

Mn_2O_3, MnO_2 (At.No.Mn = 25)

a) Find out group, Period of Mn

b) write down the sub shell electronic configuration in Short form?

c) write down the sub shell electronic configuration of Mn^{3+} ions.

d) Transitional elements shows different oxidation state Justify?

20. The minerals of Aluminium are Cryolite, clay and Bauxite

a) which is the Ore of Aluminium, write down its chemical formula.

b) what are the charecteristics possessed by the minerals that are used for the extraction of metals? (4)