

**SAKTHI MATRIC HR. SEC. SCHOOL.KANIYAMOOR**

CLASS : XII E/M

MODEL ANNUAL EXAM-8

Time: 3.00HRS

SUBJECT : Chemistry

Marks: 70

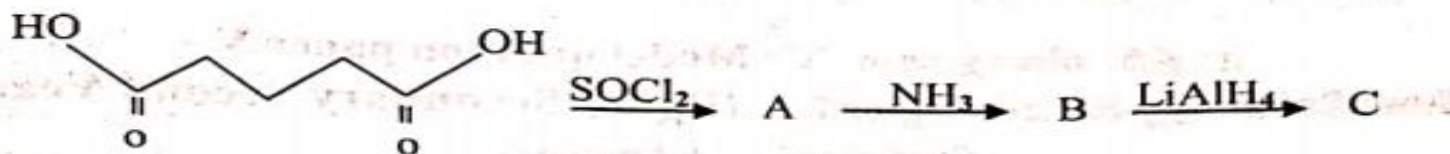
**I CHOOSE THE CORRECT ANSWER:****15\*1=15**

- Flux is a substance which is used to convert
  - Mineral into silicate
  - Infusible impurities to soluble impurities
  - Soluble impurities to infusible impurities
  - All of these
- The geometry at which carbon atom in diamond are bonded to each other is
  - Octahedral
  - hexagonal
  - Tetrahedral
  - none of these
- Permanganate ion changes to \_\_\_\_\_ in acidic medium
  - $MnO_4^{2-}$
  - $MnO_2$
  - $Mn^{3+}$
  - $Mn^{2+}$
- The only metal which crystallizes in simple cubic pattern is...
  - Pd
  - Pt
  - Po
  - Pb
- Oxidation state of Iron and the charge on the ligand NO in  $[Fe(H_2O)_5NO]SO_4$  are
  - +2 and 0 respectively
  - +3 and 0 respectively
  - +1 and +1 respectively
  - +3 and +1 respectively
- If the initial concentration of the reactant is doubled, the time for half reaction is also doubled. Then the order of the reaction is
  - Fraction
  - one
  - Zero
  - none
- Conjugate base for Bronsted acids  $H_2O$  and  $HF$  are
  - $OH^-$  and  $H_2FH^+$  respectively
  - $H_3O^+$  and  $F^-$  respectively
  - $OH^-$  and  $F^-$  respectively
  - $H_3O^+$  and  $H_2F^+$  respectively
- Faradays constant is defined as
  - charge carried by 1 electron
  - charge carried by  $6.22 \times 10^{10}$  electrons.
  - charge required to deposit one mole of substance
  - charge carried by one mole of electrons
- $HOCH_2CH_2OH$  on heating with periodic acid gives
  - methanoic acid
  - Glyoxal
  - $CO_2$
  - methanal
- The oxidizing power of oxo acids of halogens in the order...
  - $HOX > HXO_2 > HXO_3 > HXO_4$
  - $HOX > HXO_4 > HXO_3 > HXO_2$
  - $HXO_4 > HXO_3 > HXO_2 > HOX$
  - $HXO_3 > HXO_4 > HXO_2 > HOX$
- During electrolysis of molten sodium chloride, the time required to produce 0.1 mole of chlorine gas using a current of 3A is
  - 55 minutes
  - 220 minutes
  - 107.2 minutes
  - 330 minutes
- Assertion: 2,2 - dimethyl propanoic acid does not give HVZ reaction.  
Reason: 2 - 2, dimethyl propanoic acid does not have  $\alpha$  - hydrogen atom
  - if both assertion and reason are true and reason is the correct explanation of assertion.
  - if both assertion and reason are true but reason is not the correct explanation of assertion.
  - assertion is true but reason is false
  - both assertion and reason are false.
- The secondary structure of a protein refers to
  - fixed configuration of the polypeptide backbone
  - hydrophobic interaction
  - $\alpha$ -helical backbone.
  - sequence of  $\alpha$ -amino acids
- Terylene is an example of
  - polyamide
  - polythene
  - polysaccharide
  - polyester
- Which one of the following is an example for first order reaction \_\_\_\_\_
  - Iodination of acetone
  - Decomposition of hydrogen peroxide
  - Decomposition of HI on gold
  - Oxidation of KI by potassium per sulphate

**II ANSWER ANY SIX QUESTIONS AND QUESTION NO: 24 IS COMPULSORY****6\*2=12**

- Difference between minerals and ores.
- Out of  $Lu(OH)_3$  and  $La(OH)_3$  which is more basic?
- What is crystal field splitting energy?
- Give 3 ex for zero order?
- A copper electrode is dipped in 0.1M Copper sulphate solution at 25-degree C. Calculate the electrode potential of copper. [Given:  $E^0 Cu^{2+}/Cu = 0.34V$ ].

21. What is Metamerism? Give an example?  
 22. Name the vitamins whose deficiency cause i) rickets ii) scurvy  
 23. How do antiseptics differ from disinfectants?  
 24. Identify A, B and C



### III ANSWER ANY SIX QUESTIONS AND QUESTION NO: 33 IS COMPULSORY

6\*3=18

25. How will you identify borate radical.  
 26. Chalcogens belongs to P-block give reason.  
 27. Define isotropy and Anisotropy?  
 28. Write the relationship between ionic product and solubility product ( $K_{sp}$ )  
 29. Write the general characteristics of catalyst  
 30. What is Urotropine? How is it prepared?  
 31. Identify A, B and C  $\text{C}_6\text{H}_5\text{NO}_2 \xrightarrow{\text{Fe/HCl}} \text{A} \xrightarrow{\text{HNO}_2} \text{B} \xrightarrow{\text{C}_6\text{H}_5\text{OH}} \text{C}$   
 32. Explain intermediate compound formation theory.  
 33. An organic compound (A) of molecular formula is  $\text{C}_7\text{H}_6\text{O}$  on treatment with 50% NaOH gives B ( $\text{C}_7\text{H}_8\text{O}$ ) and ( $\text{C}_7\text{H}_5\text{O}_2\text{Na}$ ) C. Compound C react with soda lime ( $\text{NaOH}/\text{CaO}$ ) to gives D ( $\text{C}_7\text{H}_6\text{O}_2$ ) Identify A, B, C and D with necessary reaction.

### IV ANSWER ALL THE QUESTIONS:

5\*5=25

34. a) Explain zone refining process? (5)  
 (OR)  
 b) Difference between Diamond, Graphite. (2)  
 c) Write note about catenation. Write any two condition for catenation? (3)  
 35. a) Describe the variable oxidation state of 3d series elements. (3)  
 b) Transition metals show high melting point why? (2)  
 (OR)  
 c) Write the postulates of VBT. (5)  
 36. a) Difference between crystalline and amorphous solids. (3)  
 b) What is F-centre (2)  
 (OR)  
 c) Discuss the lowry-Bronsted concept of acid & base. (5)  
 37. a) Describe the some features of catalysis by zeolites. (5)  
 (OR)  
 c) Explain the mechanism of Cannizzaro reaction. (3)  
 d) Explain the Reducing nature of Formic acid. (2)  
 38. a) Write a note on Denaturation of proteins? (2)  
 b) Outline the classification of carbohydrates? (3)  
 (OR)  
 c) How the following conversions are effected? (5)  
 i) nitrobenzene  $\rightarrow$  1,3,5-trinitro benzene  
 ii) nitrobenzene  $\rightarrow$  N-phenyl hydroxylamine  
 iii) nitrobenzene  $\rightarrow$  aniline  
 iv) nitrobenzene  $\rightarrow$  hydro benzene  
 v) nitrobenzene  $\rightarrow$  azoxybenzene

“KEEP YOUR FACE TO THE SUNSHINE AND YOU CANNOT SEE A SHADOW”.

R. RAMALINGAM, M.Sc, M.Ed, M.Phil  
 PG. ASST. IN. CHEMISTRY  
 SAKTHI MATRIC HR SEC SCHOOL  
 KANIYAMOOR.