Oct -2014

कानन - 017

CHEMISTRY PAPER - II : CH - 122
Organic & Inorganic Chemistry
(12136)

P. Pages : 4

Time : Two Hours **Max. Marks : 40**

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answer sheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. All questions are compulsory.
5. Figures to the right indicate full marks.
6. Use of logarithmic table and non-programmable calculator is allowed.

1. Attempt **any eight** of the following. **8**

i) Molecular formula of alkyl halide is _____ .

a) $C_nH_{2n+2}X$ b) $C_nH_{2n+1}X$

c) $C_nH_{2n}X$ d) $C_nH_{2n}X_2$

ii) What is the effect of $SOCl_2$ on CH_3-CH_2-COOH gives

a) $CH_3-CH_2-\overset{\overset{O}{\|}}{C}-Cl+HCl+SO_2$

b) $CH_3-CH_2-\underset{\underset{O}{\|}}{C}-Cl+H_2O+SO_2$

c) $CH_3-CH_2-\underset{\underset{O}{\|}}{C}-Cl+Cl_2+SO_2$

d) None of these

iii) 2-Butanol is an example of _____.

a) Primary alcohol b) Secondary alcohol

c) Tertiary alcohol d) Aromatic alcohol

iv) In Friedel craft acylation reaction hydrogen atom of benzene ring is replaced by _____.

a) Alkyl group b) Acyl group

c) Acyl or alkyl group d) Sulphonic acid group

v) Propanol on reduction with H_2 / Ni gives _____.

a) 1-Propanol b) 2-Propanol

c) Propanoic acid d) None of these

vi) n-Propyl bromide on treatment with aq. KOH produce.

a) n-Propyl alcohol b) Propene

c) Propyne d) Propane

vii) Acetyl chloride on reduction with Ammonia produces _____.

a) Acetic acid b) Acetamide

c) Acetic anhydride d) Ammonium acetate

viii) Standard solution is a solution of _____.

a) Accurately known concentration.

b) Definite quantity of substance in definite volume.

c) Secondary standard.

d) Both a & b.

ix) Correct statement is _____.

a) formula weight of NaOH is 40.

b) Equivalent weight of NaOH is 40.

c) Equivalent weight of NaOH is same as its formula weight.

d) All of the above.

x) One millimole is equal to _____ moles.

a) $\frac{1}{1000}$ b) $\frac{1}{100}$

c) 1000 d) 100

2. Answer **any four** of the following. **8**

i) Give classification of monohydric alcohols with one example each.

ii) Identify the products A and B of the following reaction.

$$CH_3Br + KCN \rightarrow A \xrightarrow{H_3O^{\oplus}} B$$

iii) Draw the structure of the following compounds – **any two.**

a) Benzene b) Pyridine

c) Anthracene

iv) What is the effect of following on CH_3CHO

a) NH_2OH b) $Ph-NH-NH_2$

v) Give any two examples of primary standard.

vi) Define the term 'Molarity' with one example.

3. Answer **any two** of the following. **8**

i) Explain Huckel rule of aromaticity with suitable example.

ii) Write a note on the following.

a) Aldol condensation

b) Cannizzaro reaction

iii) Define the terms – Titrant, Analyte, Equivalence point and End point.

4. a) What are standard solutions & primary standard substances. Give requirements and examples of primary standard. 6

OR

a) What is SN^2 reaction? Explain its mechanism with energy profile diagram. 6

b) Write short note on Hell-Volhard Zelinsky reaction. 2

5. Answer **any two** of the following. 8

i) What is Grignard reagent? Explain how benzoic acid is prepared from Grignard reagent.

ii) Write the reaction of friedel craft's alkylation and friedel craft's acylation.

iii) How many ml of 12N HCl is required to prepare 250ml $N/10$ HCl solution.

****