3rd Sem. / TP / TC

**Subject : Physical and Organic Chemistry /
Basic Chemistry**

Time : 3 Hrs.   M.M. : 100

SECTION-A

Note: Objective type questions. All questions are
compulsory   (10x1=10)

Q.1   Name two phases that a colloidal solution has.

Q.2   Write the equation of Ist order reactions.

Q.3   Give an example of catalytic promotar.

Q.4   What is the pH of pure water?

Q.5   Give an example of strong acid and strong base.

Q.6   Name the element that is present in all organic
compounds.

Q.7   What is fat?

Q.8   What is formaline?

Q.9   Give an example of a acidic buffer.

SECTION-D

Note: Long answer type questions. Attempt any three
questions out of four questions.   3x10=30

Q.33 What is Le-chatelier's Principle, and explain the
effect of change of Concentration on the state
of equilibrium.

Q.34 An organic compound on analysis give
following percentage composition C=57.8,
H=3.6 and O=38.6. calculate Molecular
formula, if Mol wt. is 166.

Q.35 Explain in detail the cleaning action of a soap.

Q.36 Give the IUPAC name of following compounds.
a) $CH_3CH_2CH_3$ b) CH_3CH_2Cl
c) CH_3CH_2OH d) CH_3CH_2CHO
e) CH_3COOH

Q.10 Ag^+ behaves as lewis _____ (acid or base)

SECTION-B

Note: Very short answer type questions. Attempt any ten questions out of twelve questions. 10x2=20

Q.11 Why do we add alum to purify water ?

Q.12 A solution is prepared by dissolving 18:25 gm of NaOH in distilled water to give $200Cm^3$ of solution. Calculate molarity of solution.

Q.13 What is an acid define an the basic of Arrhenius concept.

Q.14 Give any two properties of aromatic Compound.

Q.15 What are the use of carbon tetra chloride.

Q.16 Why the alcohols are water soluble.

Q.17 Why the soaps do not work in hard water?

Q.18 write any two chemical property of oil.

Q.19 Name any two derivatives of carboxylic acid.

Q.20 Write a short note on Gold number

Q.21 Write the uses of glycol.

Q.22 What is the relationship between pH and POH.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. 8x5=40

Q.23 State and explain Schulze. Hardy law

Q.24 What is the difference between molecularity and order of reaction?

Q.25 Explain lock and key model of enzyme actions.

Q.26 How the presence of S is detailed in an organic compound.

Q.27 What is the difference between a soap and eletergent

Q.28 What is the difference between lyophillic and lyopholic solutions.

Q.29 Write a note on aldol condensations.

Q.30 What are the uses of alcohols.

Q.31 Write a short note on aids.

Q.32 What are the advantages of pH scale.