17312

11819

3 Hours / 100 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Answer each next main Question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Answer any TEN of the following: **20**

a) Define aliphatic compounds. Give two examples.

b) Represent the structure of following organic compounds:

(i) 1 - Chloropentane

(ii) Cyclohexane

c) Write preparation of ethene from dehydrogenation of alkyl halides.

d) Differentiate between alkanes and alkenes with respect to general formula.

e) Write any two physical properties of acetylene.

f) Define Baeyer's strain theory.

g) Name simplest aromatic hydrocarbon. Name its two homologs.

h) Write action of ethylchloride on benzene.

i) Write action of sodium on ethyl alcohol.

j) Name types of solutions.

Marks

k) Define indicator and give any two examples.

l) Write any two physical properties of phenol.

m) Write Ozonylis reaction of acetylene. Name the product formed.

2. Answer any FOUR of the following: **16**

a) Explain isomerism of organic compounds giving examples.

b) Define homologous series. State its general characteristics.

c) Explain following methods of preparation of alkanes.

(i) By reduction of alkyl halides.

(ii) By Wurtz coupling reaction.

d) Explain chlorination of methane.

e) Give the following reaction of benzene:

(i) Friedel craft's reaction

(ii) Mercuration

f) Give any two methods of preparation of alcohol.

3. Answer any FOUR of the following: **16**

a) Give the classification of organic compounds based on structure.

b) Explain the reaction of propane:

(i) Combustion

(ii) Dehydrogenation

c) Explain action of ozone on benzene. Name the product formula.

d) Differentiate between aliphatic and aromatic compounds.

e) Give the following reaction of ethyl alcohol:

(i) With Phosphorous Pentachloride.

(ii) With hydrogen chloride

f) Explain Quinonoid theory of acid base indicator with an example.

Marks

4. Answer any FOUR of the following: **16**

a) Explain the following terms:

(i) Polymerisation

(ii) Functional groups

Give two examples.

b) Write the methods of preparation of acetylene:

(i) From calcium carbide

(ii) From geminal dihalides

c) Write the method of preparation of monohydric and dihydric phenols.

d) Explain with examples, classification of alcohols.

e) Explain Oswald's theory with reference to

(i) Action of phenolphthalein

(ii) Action of methyl orange

f) Distinguish between an ideal solution and a non ideal solution.

5. Answer any FOUR of the following: **16**

a) Explain closed chain and unsaturated compounds with two examples, of each.

b) Describe wurtz fitting reaction.

c) Distinguish between phenol and an alcohol.

d) Define denatured alcohol. Why is alcohol denatured? Name two denaturants used for alcohol.

e) (i) What are vicinal dihalides? Indicate with reaction, preparation of alkene from vicinal dihalide.

(ii) Name simplest alkene. Write its physical state and two uses.

f) (i) Define absolute alcohol. State properties of absolute alcohol.

(ii) Comment on water tolerance of :
methanol, ethanol, propanol and butanol.

Marks

6. Answer any FOUR of the following: **16**

a) Define cycloalkane. Explain nomenclature, of cycloalkanes.

b) Explain with reaction, bromination of phenol.

c) Describe method of preparation of a cycloalkane.

d) Explain the P-X diagram for an ideal mixture of two liquids.

e) Explain with an example theory of hydrogen ion indicator.

f) (i) Explain as to why phenol discolour in air?

(ii) State two commercial uses of phenol.
