22229

24225

03 Hours / 70 Marks Seat No. | | | | | | | | |

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

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

(3) Abbreviations used convey usual meaning.

(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. Attempt any FIVE of the following: **10**

a) Define Atom. Name constituents of an atom.

b) Define an endothermic reaction. Give an example.

c) Compare aliphatic and aromatic compounds.

d) Write structural formula of ethyne. State physical state of ethyne.

e) Write structural formula of:

i) acetaldehyde

ii) propionic acid

f) Define asymmetric carbon atom with example.

g) Identify the functional group and name compound:

i) CH_3COOH

ii) CH_3CHO

Marks

2. Attempt any THREE of the following: **12**

a) Describe with an example formation of co-ordinate bond.

b) Explain concept of electronegativity with example.

c) Explain chlorination (with reaction conditions) of benzene.

d) Define stereochemistry. Explain importance of studying stereochemistry.

3. Attempt any THREE of the following: **12**

a) Define bond energy. Explain with an example its significance?

b) Describe Kekule's structure of benzene.

c) Describe with an example condensation reaction.

d) Explain in general, effect of functionality (F) on structure of a polymer on heating.

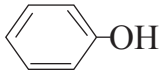
Marks

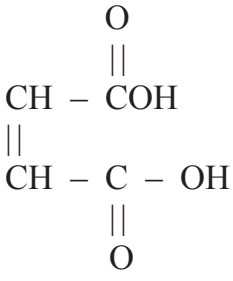
4. Attempt any THREE of the following: **12**

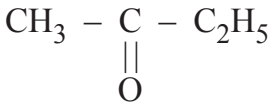
a) Explain mechanism of sulphonation of benzene

b) Define alkylation. Explain Friedel Craft's reaction of benzene with example.

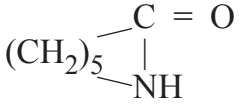
c) Name the compound and identify functional group present. (Any four)

i) 

ii)


iii)


iv) $CH_3\ (CH_2)_4\ CL$

v)


d) Differentiate between Aldehydes and Ketones.

e) Explain the process of purification of styrene polymer.

5. Attempt any TWO of the following: **12**

a) Explain Geometrical isomerism in alkanes.

b) Compare amines and amides giving examples.

c) Explain the rules of IUPAC naming nomenclature of organic compounds.

Marks

6. Attempt any TWO of the following: **12**

a) Define functionality. Explain its effect on structure of polymer.

b) Distinguish between : Geometrical and optical isomerism with examples.

c) Identify functional group and state functionality of following compounds. Name the compounds.

i) $C_6H_5 - OH$

ii) $C_6H_5 - CHO$

iii) $CH_2 = CH - CH = CH_2$