

22229

11819

3 Hours / 70 Marks

Seat No.

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- 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) Figure to the right indicate full marks.  
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

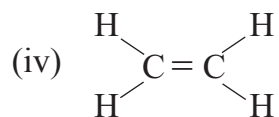
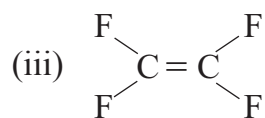
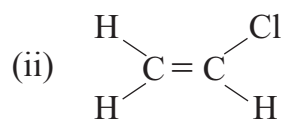
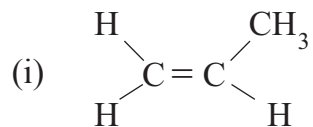
1. Answer any FIVE of the following: 10
- Define bond energy.
  - Define organic chemistry. Write its importance.
  - Draw the structural formula of esters and ethers.
  - Define Stereochemistry.
  - Distinguish between Monomer and Polymer.
  - Define an example of Stereochemistry.
  - Define electronegativity.
2. Answer any THREE of the following: 12
- List the types of bonds with example.
  - List out the general characteristics of aromatic compounds.
  - Write the addition reactions of benzene with hydrogen and chlorine.
  - Give example of Nitration and Sulphonation reactions.

P.T.O.

- 3. Answer any THREE of the following:** **12**
- Describe chemistry of compounds with asymmetric carbon atom.
  - Compare in behaviour on solubility of a low molecular weight and a polymer.
  - Explain the concept with example - atom, molecule, compound.
  - Classify the organic compounds on the basis of structure and functional group.
- 4. Answer any THREE of the following:** **12**
- Distinguish between aliphatic and aromatic compounds. Give examples.
  - Explain the rules of IUPAC naming nomenclature of organic compounds.
  - Compare geometrical and optical isomerism with an example of each.
  - Explain the effect of functionality on the structure of a polymer on the basis of heating.
  - Distinguish between aldehydes and Ketone.
- 5. Answer any THREE of the following:** **12**
- Define Bond angle, bond length, bond polarity and dipole moment.
  - Identify the functional group of following structure:
    - $\text{C}_2\text{H}_5 - \text{OH}$
    - $\text{CH}_3\text{COOCH}_3$
    - $\text{C}_2\text{H}_5 - \text{O} - \text{CH}_3$
    - $\text{H} - \text{CHO}$
  - Describe the process of purifying any one monomer.
  - Describe structure of Polyethylene and explain its chemical behaviour.

6. Answer any THREE of the following:

- Distinguish between hydrogenation and oxidation.
- Describe polyvinyl chloride (PVC) with its structure.
- Compare amines and amides. Give examples.
- Identify the following monomers (Name it)



- Describe Friedel Craft's reaction of benzene.

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