

17326

21819

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data, if necessary.
(5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any TEN of the following:** **20**
- Define empirical formula.
 - State classification of Hydrocarbons.
 - Write functional group of Aldehyde and Ketone
 - State any four applications of organic chemistry.
 - Define: isomerism.
 - Draw structure and state two properties of benzene
 - Define- functional group.
 - What does mesomeric effect means?
 - Define oxidation.
 - Enlist any four organic compounds.
 - What do you mean by substitution reaction?
 - Define aromatic compound.
 - State types of chemical bond.
 - Write structural formula and chemical name of ethanol.

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- 2. Attempt any FOUR of the following:** **16**
- Classify organic compound on basis of functional group.
 - Explain sulphonation reaction of benzene.
 - Explain in brief friedel craft alkylation reaction.
 - State general characteristics of organic compound.
 - Write the name and structure of first four alkyl halids.
 - Explain mechanism of chemical bond.
- 3. Attempt any FOUR of the following:** **16**
- With suitable example explain elimination and rearrangement reaction.
 - Differentiate between empirical and molecular formula.
 - Explain characteristics of aromatic compound.
 - Identify the following functional group.
–R–OH, R–O–R, R–NH₂, R–X
 - State classification of organic compound on basis of structure.
 - How will you prepare Benzene Hexachloride?
- 4. Attempt any FOUR of the following:** **16**
- Define: Atom, An element, Molecule and Compound.
 - Differentiate between aliphatic and aromatic compound.
 - Write down the structural formula and IUPAC names of:
 - Ethylchloride
 - Proponal
 - Isobutyl methyl ether
 - Dimethyl ketone
 - How phenol react with dilute and concentrated Nitric acid.
 - Elaborate- Electrophiles Nucleophiles
 - Describe optical isomerism.

- 5. Attempt any FOUR of the following:** **16**
- Percentage composition of an organic substance as determined by analysis was C = 14.5, H = 1.8, O = 19.24 CL = 64.46. Calculate empirical formula.
 - State IUPAC nomenclature rules for Alcohol and Keton
 - Explain in brief geometric isomerism.
 - With example explain addition reaction.
 - Differentiate between organic and inorganic compound.
 - Explain-sulphonation reaction with example.
- 6. Attempt any FOUR of the following:** **16**
- State importance of organic chemistry.
 - Write formula for carboxylic acid write name and structure of any three carboxylic acids.
 - What are halogenations? Explain with example.
 - Define:
 - Chiral compound
 - Plan polarized light
 - Optically inactive compound
 - Structural isomerism
 - Describe condensation reaction example.
 - Define the following terms:
 - Asymmetric carbon atom
 - Stereochemistry.
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