

22241

12425

03 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 answer with neat sketches wherever necessary.
(4) Figures to the right indicate full marks.
(5) Assume suitable data, if necessary.
(6) 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 the term ‘Organic Compounds’.
 - b) Draw the structure of propyne.
 - c) Name the type of organic reaction.
 - d) State the general formula of representing alkane and alkene.
 - e) State any two industrial uses of alcohol.
 - f) Distinguish between Aldehyde and Ketone.
 - g) Draw the structure of first four Carboxylic acids in Homologous series.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Explain the term homologous series with suitable examples.
 - b) State four characteristics of organic compounds.
 - c) Explain Wurtz synthesis with chemical reaction.
 - d) Describe the method of ethanol preparation from ethylene.
- 3. Attempt any THREE of the following:** **12**
- a) Classify organic compounds on the basis of their functional group.
 - b) Describe the method of preparing ethane by Kolbe method.
 - c) Define the following:
 - i) Alcohol
 - ii) Absolute alcohol
 - iii) Power alcohol
 - iv) Methylated spirit.
 - d) Explain Rosenmund reaction with suitable example.
- 4. Attempt any THREE of the following:** **12**
- a) Describe the action of water on calcium carbide. Give balanced equation.
 - b) Describe the method of preparing acetone from isopropyl alcohol.
 - c) Two inorganic reagent is given below. Identify the product if these reagent react with Carboxylic acid. Give supporting chemical reactions for same:
 - i) PCl_3
 - ii) SOCl_2 .
 - d) How will you prepare acetic acid from Grignard reagent.
 - e) Describe quick Vinegar process.

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

- a)
 - i) Explain mechanism of SN^2 reaction draw energy profile diagram for the same.
 - ii) Classify organic compound based on their structure.
- b) Describe following:
 - i) Substitution reaction
 - ii) Addition reaction.
- c) Explain physical and chemical properties of alkene.

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

- a) Predict the product of the following reaction. Identify name of reactant and product:
 - i) Dehydration of alcohols.
 - ii) Dehydrogenation of Alkyl halide.
 - b) Describe the method of preparing ethanol –
 - i) Reduction of Acetaldehyde
 - ii) Draw the structure of –
 - 1) Ethylene glycol
 - 2) Glycerol.
 - c) Explain physical and chemical properties of Aldehyde and Ketone.
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