

22241

24225

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) 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 FIVE of the following :** **10**
- a) Name types of organic reactions.
 - b) Define organic compounds.
 - c) List applications of methane and ethane.
 - d) State general formula of representing Alkane and Alkenes.
 - e) Write industrial uses of Alcohol.
 - f) Compare between Aldehyde and Ketone.
 - g) Draw the electronic structure of propyne.
- 2. Attempt any THREE of the following :** **12**
- a) Classify organic compounds on the basis of their functional group.
 - b) Explain the method of preparation of ethane by Hertz synthesis.
 - c) Compare SN^1 and SN^2 reaction.
 - d) Explain the action of water on calcium carbide. Write balanced chemical equations.

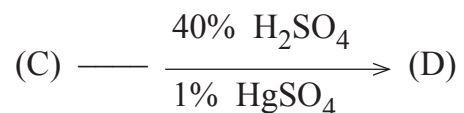
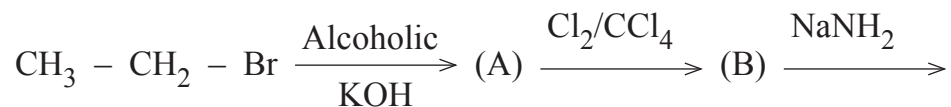
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- 3. Attempt any THREE of the following :** **12**
- Explain the method of preparing ethane by Kolbe method.
 - Explain Homolytic bond fission with suitable examples.
 - Explain Rosenmund reaction with suitable example.
 - Write any four properties of Alkanes.
- 4. Attempt any THREE of the following :** **12**
- Explain Elimination reaction with suitable example.
 - Explain the reaction of Esterification of Carboxylic acid.
 - Define functional group. Write method for determines of acidic group.
 - Write oxidation reaction of primary alcohol and secondary alcohol.
 - Predict the product of the following reaction. Also identify the name of reactants and products.
- $$\text{CH}_3 - \text{CH}_2 - \text{Br} + \text{NaCN} \rightarrow \text{-----} \xrightarrow{\text{H}_3\text{O}^\oplus} \text{-----} + \text{NH}_3$$
- 5. Attempt any TWO of the following :** **12**
- Explain any two methods of preparing Ketone.
 - Explain mechanism of SN^2 reaction. Draw the energy profile diagram of SN^1 and SN^2 reaction.
 - Explain chemical properties and uses of Acetone.

6. Attempt any TWO of the following :

12

- a) Identify the compound A, B, C and D in the following series of reaction.



- b) i) Explain 'quick' vinegar process.
 ii) Explain decarboxylation of malonic acid.
- c) Identify and write name of products.

