

17312

16117

3 Hours / 100 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) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.
 - (8) Use of steam tables, logarithmic, Mollier's chart is permitted.

Marks

1. Attempt any TEN of the following :

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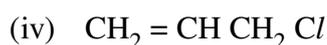
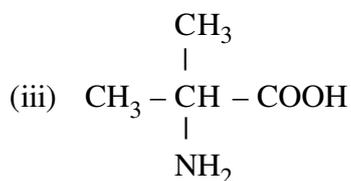
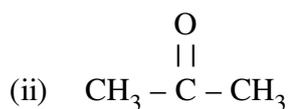
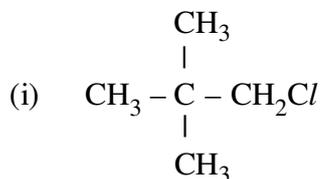
- (a) Define organic and inorganic chemistry.
- (b) Give the structure of following organic compound :
 - (i) Ethanoic acid
 - (ii) Formaldehyde
- (c) Give any four physical properties of alkanes.
- (d) Differentiate between Alicyclic compounds and Hetrocyclic compounds.
- (e) Define saturated and unsaturated hydrocarbons.
- (f) Write four physical properties of Alcohol.

- (g) Give classification of aromatic compound.
- (h) Define functional group. Explain it with suitable examples.
- (i) State Raoult's Law.
- (j) Define indicator and give any two examples.
- (k) Give IUPAC name of
- (i) n-propyl alcohol
 - (ii) sec-butyl alcohol
- (l) Distinguish between alcohol and phenol with respect to chemical test.

2. Attempt any FOUR of the following :

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- (a) How organic compound are classified ? State example of each.
- (b) How aliphatic compounds are classified ? Explain with structural formula.
- (c) State rules for nomenclature of branched chain hydrocarbons with suitable example. (any four)
- (d) Give IUPAC name of



- (e) Describe common system and IUPAC nomenclature methods of organic compounds.
- (f) Give any two reactions of alkanes.

- 3. Attempt any FOUR of the following : 16**
- (a) Give two methods of preparation of alkenes.
 - (b) Explain the following terms :
 - (i) Isomerism
 - (ii) Polymerisation
 - (c) Explain Baeyer's strain theory.
 - (d) Give the uses of Acetylene (any eight).
 - (e) Explain wurtz-fitting reaction on Benzene.
 - (f) Write following reaction on Benzene :
 - (i) Nitration
 - (ii) Combustion
- 4. Attempt any FOUR of the following : 16**
- (a) Explain chain Isomerism and position Isomerism.
 - (b) How will you prepare benzene
 - (i) by reduction of ketone ?
 - (ii) by action of alkyl halides ?
 - (c) Give any two methods of preparation of phenols.
 - (d) Differentiate between primary, secondary and tertiary alcohols.
 - (e) Explain minimum boiling azeotropes mixture with vapour liquid equilibrium diagram.
 - (f) Distinguish between ideal and non-ideal solutions.
- 5. Attempt any FOUR of the following : 16**
- (a) Define solution and state four types of solution with example.
 - (b) What are paraffins ? Why are they called so ?
 - (c) Give any two reaction of alkenes.

- (d) How will you prepare alcohols by
 - (i) Ethyl iodide ?
 - (ii) Methyl bromide ?
- (e) Give the uses of alcohols (any four).
- (f) How vapour pressure of solvent lowered by addition of non-volatile solute ?

6. Attempt any FOUR of the following :

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- (a) Explain Ostwald's theory of Acid-Base indicators.
 - (b) Write general formula of alkene & alkyne and state two examples of each.
 - (c) Give any four physical properties of Alkyl Halides.
 - (d) What are alkyl halides ? How are they classified ?
 - (e) Distinguish between monohydric, dihydric phenols and write two uses of phenol.
 - (f) Explain Friedal-Craft's reaction. How organic compound prepared by this reaction (any one reaction) ?
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