

# 17312

**21718**

**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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

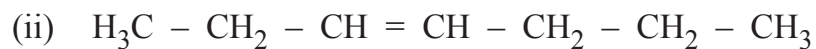
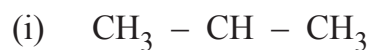
**Marks**

**1. Attempt any TEN of the following:**

**20**

a) Give any two characteristics of organic compounds.

b) Give IUPAC names of:

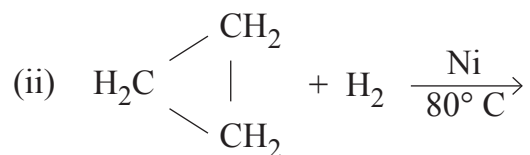
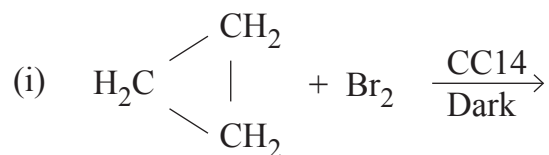


c) Give any two physical properties of alkanes.

d) State two uses of acetylene.

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e) Write the products of the following reaction:



- f) Distinguish between alcohol and phenol with respect to chemical test.
- g) Name two homologues of benzene.
- h) Write two uses of phenol.
- i) Write nitration reaction of benzene.
- j) State the action of halogen acids on alcohol with chemical reaction.
- k) Define solution and give any two examples.
- l) Define:
- (i) Indicator
  - (ii) Azeotropic mixture

2. **Attempt any FOUR of the following:**

**16**

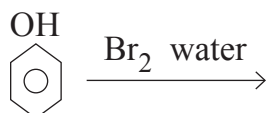
- a) What is homologous series? Explain with examples.
- b) How organic compounds are classified on the basis of functional group?
- c) Explain aromatisation in alkanes.
- d) Give two methods of preparation of alkenes.
- e) Explain isomerism in alkyl halides.
- f) Differentiate between primary, secondary and tertiary alcohols.

**3. Attempt any FOUR of the following:****16**

- a) Write structures of following compounds:
  - (i) 2, 3 - dimethyl heptane
  - (ii) 2 - methyl propane
- b) Explain Bayer's strain theory of stability of cycloalkanes.
- c) Give the structure of benzene and any two preparation methods of benzene.
- d) State the action of ammonia and  $H_2SO_4$  on phenol with chemical reaction.
- e) Explain chain isomerism, position isomerism and functional isomerism in alcohols.
- f) Explain Quinonoid theory with proper example.

**4. Attempt any FOUR of the following:****16**

- a) How will you classify organic compounds on the basis of structure?
- b) Define saturated and unsaturated compounds with examples.
- c) Complete the following reaction



- d) Write reaction for preparation of alcohol by hydration of alkenes by using conc. sulphuric acid.
- e) Define Raoult's law and give classification of solution.
- f) Explain minimum boiling azeotropes and maximum boiling azeotropes with diagram.

**5. Attempt any FOUR of the following:****16**

- a) Give IUPAC rules for naming of monofunctional compounds.
- b) How will you prepare phenol from cumene.
- c) State four physical properties of alcohol.
- d) Distinguish between ideal and non-ideal solution.
- e) Give methods of choosing indicators for acid-alkali titration.
- f) Give any one preparation method and physical properties of cycloalkanes.

**6. Attempt any FOUR of the following:****16**

- a) What is polymerisation? Explain polymerisation of ethylene with reaction.
  - b) Give the following reaction of benzene:
    - (i) Friedel craft reaction
    - (ii) Grignard reaction
  - c) How alkenes are prepared from:
    - (i) alcohols
    - (ii) alkyl halides
  - d) Explain Ostwald's ionisation theory.
  - e) Why azeotropic mixture cannot be separated by ordinary distillation?
  - f) How will you prepare ethylamine from ethyl iodide?
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