17221

16172

3 Hours / 100 Marks Seat No. | | | | | | | | |

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. Solve any FIVE : **20**

(a) Give the classification of organic compounds on the basis of their functional group.

(b) Explain the mechanism of SN_1 reaction.

(c) How is ethylene prepared by dehydration of alcohols. Give 2 physical properties & two uses of ethylene.

(d) Define alcohols. Give it's example. Explain any one method for preparation of alcohols.

(e) Explain the following reaction with respect to formaldehyde :

(i) Addition reaction (ii) Substitution

(f) What is the action of Heat & KOH on oxalic acid ?

(g) What are proteins ? Give its classification.

2. Attempt any TWO : **16**

(a) What are alkanes ? Explain the wurtz synthesis method for preparation of Ethane. How does chlorination of Methane takes place ?

(b) How is Acetic acid prepared from :

(i) Grignard Reagent

(ii) Alkyl cyanide

(c) What are amino acids ? Give its classification with suitable examples.

3. Attempt any TWO : **16**

(a) How is dimethyl ketone prepared from –

(i) Isopropyl alcohol (ii) Acetic acid. Give four uses of acetone.

(b) Explain Homologous series with suitable example. What are organic compounds ?

(c) What is the action of following on methyl alcohol :

(i) Na-metal (ii) PCl_3 (iii) $SOCl_2$ (iv) H_2SO_4 (20%)

4. Attempt any TWO : **16**

(a) Explain the following reactions of carboxylic acid with suitable e.g.

(i) Amide formation (ii) Acid chloride formation.

(b) Explain the preparation of Ethyne from –

(i) de-hydrohalogenation (ii) Metallic calcium carbide.

(c) Describe the method of separating proteins & define isoelectric point.

5. Attempt any TWO : **16**

(a) Explain the SN_2 mechanism of Nucleophilic substitution reaction.

(b) Explain addition and elimination reaction with suitable example.

(c) How is ethylene prepared by –

(i) dehydration of alcohols

(ii) thermal & catalytic cracking

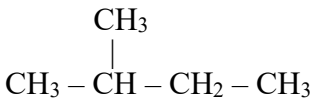
6. Attempt any TWO : **16**

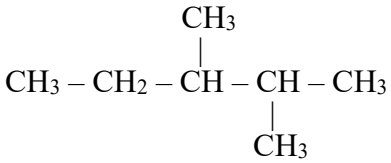
(a) Explain the structural formula of

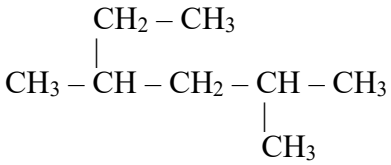
Methane & Ethane

Give the IUPAC nomenclature of

following :

(i)


(ii)


(iii)


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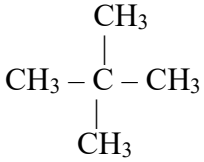

(b) How is acetone prepared from –

(i) acetylene

(ii) Isopropyl alcohol.

(c) Distinguish between primary, secondary & tertiary alcohol.

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