

Day : Monday

Time : 10:00 AM-01:00 PM

Date : 23-01-2023

W-20661-2022

Max. Marks : 75

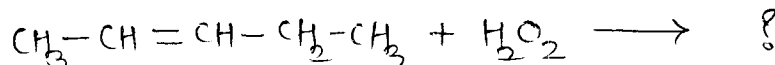
N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

Q.1 Answer the following: **(20)**

- a) What is β - elimination reaction?
- b) Predict the product.



- c) What is E1 (CB) mechanism?
- d) Give structure and used of Chloral hydrate.
- e) Why peroxide effect is only observed with HBr?
- f) What product is obtained when benzaldehyde is treated with acetic anhydride?
- g) What is Diels-Alder reaction?
- h) What is allylic rearrangement?
- i) Give structure and uses of Ethyl alcohol.
- j) What product is obtained when alkenes are treated with water?

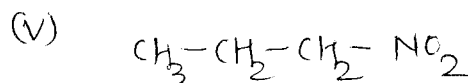
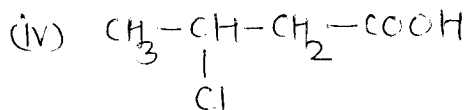
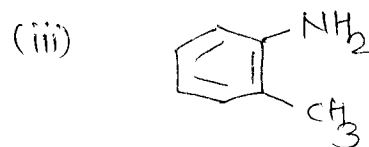
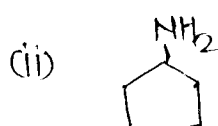
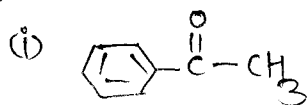
Q.2 Answer any **TWO** of the following: **(20)**

- a) Define and classify Isomerism. Explain structural isomerism with suitable examples.
- b) Differentiate between $\text{S}_{\text{N}}1$ and $\text{S}_{\text{N}}2$ reactions.
- c) Give reaction and mechanism involved in Cannizzaro reaction. What is crossed cannizzaro reaction?

SECTION-II

Q.3 Answer any **SEVEN** of the following: **(35)**

- a) Explain Saytzeff orientation in elimination reaction.
- b) What Markovnikov addition of HBr to alkenes? Explain with mechanism.
- c) What is aldol condensation? Explain with mechanism.
- d) What product is obtained when benzaldehyde is treated with sodium cyanide? Explain with mechanism.
- e) Give structure and uses of :
 - i) Benzoic acid
 - ii) Tartaric acid
 - iii) Oxalic acid
 - iv) Dimethyl phthalate
 - v) Acetyl salicylic acid
- f) Give IUPAC names of the following compounds.



- g) Write a short note on Hybridization.
- h) What happens when alkenes are treated with ozone gas? Explain with mechanism.
- i) Differentiate between E1 and E2 reactions.