

QUE.2 Answer the following questions in short. (Any seven). (14)

- i Why plastics are used in an enormous and expanding range of products?
- ii Classify the various processes of polymerization of ethylene monomer.
- iii Write 'one stage process' for preparation of vinyl acetate monomer.
- iv Mention the reaction route of hexamethylenediamine manufacture.
- v What is telomerization?
- vi Name the different types of acrylic polymer.
- vii Describe preparation of polycarbonate by phosgenation process.
- viii What is the role of UV-stabilizer in plastics?
- ix Mention the properties of Teflon.

QUE.3

- A Write a note on the Phillips and Ziegler process for the manufacturing of HDPE by low pressure process. (6)
 - B Describe the optical isomerism in polypropylene and discuss the properties of PP. (6)
- OR
- B Discuss the Hercules slurry process for the manufacturing of polypropylene by continuous polymerization process with its limitations.

QUE.4

- A How is styrene monomer prepared commercially with ethyl alcohol as one of the starting material? Explain the process in detail. (6)
 - B Give the details of bulk polymerization process as practiced commercially to produce polystyrene. (6)
- OR
- B Describe briefly Poly(vinyl formal), poly(vinyl butyral) and poly(vinyl acetals).

QUE.5

- A Elaborate the manufacturing process of adipic acid and hexamethylene diamine. (6)
 - B Using the necessary schematic diagram describe the manufacturing process of Nylon,6 with its characteristics. (6)
- OR
- B Discuss the manufacturing process of polyethyleneterephthalate (PET).

QUE.6

- A What is the role of additives in plastics? Discuss briefly about plasticizers and fillers as an additives. (6)
 - B Write a short note on fluoropolymers. (6)
- OR
- B Discuss the recycling process of plastics.

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