

**BACHELOR OF TECHNOLOGY (C.B.C.S.) (2014 COURSE)**  
**B.Tech.Sem - VI CHEMICAL :SUMMER- 2022**  
**SUBJECT : POLYMER TECHNOLOGY**

Day : Thursday  
Date : 23-06-2022

**S-13507-2022**

Time : 02:30 PM-05:30 PM  
Max. Marks : 60

**N.B.:**

- 1) All Questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Both section should be written in **SAME** answer book.

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**Q.1** Why monomers are called as building block of polymer? What are the effects of monomer structure and properties on polymer properties and applicability? (10)

**OR**

What is the classification of polymerization reactions? What are their mechanisms? (10)

**Q.2** What is molecular weight distribution? Which are different types of molecular weights used in polymers? (10)

**OR**

How presence of functionality and chemical bonding in polymers affect polymer properties and applicability? (10)

**Q.3** Which are the different polymerization techniques? What are their benefits and limitations (10)

**OR**

What is the kinetics of free radical polymerization? How degree of polymerization is affected by initiator concentration? (10)

**Q.4** What is glass transition temperature? Which are the factors affecting glass transition temperature? Explain them with suitable example. (10)

**OR**

How crystallinity in polymer affects its properties and applicability? (10)

**Q.5** What is blend? Which are the factors affecting blend miscibility and properties? (10)

**OR**

What is Fiber Reinforced Plastic (FRP)? Which are the factors affecting properties of FRP? (10)

**Q.6** What is compounding? Which are the methods of compounding? (10)

**OR**

What is the working principle of reaction injection molding? How it is used in polymer processing? (10)

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