

**III B.Tech II Semester Supplementary Examinations, April/May 2005**  
**POLYMER ENGINEERING**  
**(Chemical Engineering)**

**Time: 3 hours**

**Max Marks: 80**

**Answer any FIVE Questions**  
**All Questions carry equal marks**

\*\*\*\*\*

1. (a) Discuss the different structures of protein.  
(b) Illustrate the types of bonds, other than peptide bonds, that may be found in a protein.
2. (a) Describe the manufacturing process of Resol (I stage) resins.  
(b) Explain the properties of phenol-Formaldehyde resins.
3. (a) Compare the properties of expoxy mouldings with those of polyesters.  
(b) What are the different types of polurethanes that can be obtained. Explain with polymerization reactions.
4. What is expanded polystyrenes ? How is it prepared ? What are their important Applications.
5. Explain the various processing methods available for processing of thermoplastic materials.
6. Distinguish between isotactic, syndiotactic and atactic polymer structures with examples. Compare their properties.
7. (a) Explain principle of Transfer molding with advantages and disadvantage  
(b) Explain with sketch the working of pot transfer molding
8. (a) Explain in detail the general characteristics of an extrusion die.  
(b) Explain with sketch the working of pipe die.

\*\*\*\*\*