

B. TECH.
(SEM IV) THEORY EXAMINATION 2017-18
PRINCIPLES OF POLYMERIZATION

*Time: 3 Hours**Total Marks: 100***Note:** 1. Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief.** **2 x 10 = 20**
- a. Draw the structures of PMMA and PVC
 - b. Define T_g
 - c. Give two examples of High Performance Polymers
 - d. What are Natural Polymers
 - e. Write the types of PE
 - f. Name the polymer which is substitute of Glass
 - g. Write the percentage of Transmittance of PC and PET
 - h. Define Toughness
 - i. What are Crystalline Polymers
 - j. Name two examples of Plastics used in Automobile Industries

SECTION B

- 2. Attempt any three of the following:** **10 x 3 = 30**
- a. Give details of Classification of Polymers
 - b. Describe how T_g is affected by various factors.
 - c. Explain the journey of polymers from monomers
 - d. Define Morphology of polymers and what are the factors affecting crystallinity of polymers
 - e. Write short note on Ionic polymerization mechanisms

SECTION C

- 3. Attempt any one part of the following:** **10 x 1 = 10**
- a. Difference between any two Optical Properties
 - b. Difference between Ideal and Non-Ideal solutions
- 4. Attempt any one part of the following:** **10 x 1 = 10**
- a. Difference between any two Thermal properties
 - b. Difference between any two Mechanical properties
- 5. Attempt any one part of the following:** **10 x 1 = 10**
- Write short note on
- (a) Tacticity
 - (b) Amorphous polymers
- 6. Attempt any one part of the following:** **10 x 1 = 10**
- Draw the Structures of the following
- (a) PP, PTFE
 - (b) PES, PS
- 7. Attempt any one part of the following:** **10 x 1 = 10**
- (a) Describe any one processing method of Plastics
 - (b) Describe about Organic polymers