

Total No. of Questions : 8]

[Total No. of Printed Pages : 1

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**CM-702(B) (GS)**  
**B.E. VII Semester Examination, June 2020**  
**Grading System (GS)**  
**Polymer Technology**  
*Time : Three Hours*

**Maximum Marks : 70**

**Note:** i) Attempt any five questions.  
ii) All questions carries equal marks.

1. Explain solution polymerization and write advantages and disadvantages of solution Polymerization.
2. Write short notes on the following:(Any two)
  - a) Additives
  - b) Polyesters (Dacron)
  - c) Aminolysis
  - d) Environmental aspects of polymer industries
3.
  - a) Describe the effect of mono, di, polyfunctional monomers.in structure of polymers.
  - b) Explain the mechanism of cationic polymerization with an example.
4. Classify the polymers with respect to their origin. Give examples of each with structure?  
OR  
Describe the role of retarders, inhibitors and chain transfer agents in free radical polymerization.
5. Describe the Maxwell model for visco elasticity.  
OR  
Give the relationship between particle size and volume fraction in a dispersion strengthened composite.
6. What is reinforcement and list the different types and forms of the reinforcing materials? Compare the aramide fiber reinforcements with boron fiber reinforcements.
7. Write short notes on following:
  - a) Draw the structure of the monomer each of the following polymers:
    - i) Poly (Vinyl chloride),
    - ii) Nylon-6.
  - b) What is a biodegradable polymer? Can polymers be recycled?
8. Write short notes on following:
  - a) Thermoplastic composites
  - b) Distinguish between homo and copolymers.
  - c) Thermal stability and thermal degradation of polymers.

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