

- Q.19 Discuss emulsion polymerization technique in brief. (CO2)
- Q.20 Describe the role of plasticizers in plastic. (CO4)
- Q.21 Explain the structure, two properties and two uses of urea formaldehyde resin. (CO3)
- Q.22 Explain addition polymerization. (CO1)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 Describe the solution polymerization in detail and state its two merit and demerit over bulk polymerization. (CO2)
- Q.24 Explain the followings:
- Structure, properties and uses of Nylon-66 (CO3)
 - Effect of molecular weight on any two properties of polymer. (CO1)
- Q.25 Discuss Injection molding polymer processing technique with neat and labelled sketch. (CO4)

No. of Printed Pages : 4
Roll No.

220563C

6th Sem / Chemical

Subject : Polymer Technology

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 What is the role of initiators in polymerization? (CO1)
- Stop chain growth
 - start the reaction
 - Add colour
 - none of these
- Q.2 Which type of polymerization involves the loss of small molecules like water? (CO1)
- Addition
 - Condensation
 - Free radical polymerization
 - none of these
- Q.3 Which polymer technique uses only pure monomer? (CO2)

- a) Bulk b) Solution
 c) Emulsion d) Suspension
- Q.4 Which of the following monomeric unit is used for the production of polyethylene? (CO3)
- a) Methane b) Ethylene
 c) Ethyne d) Ethane
- Q.5 What is the primary role of stabilizer in plastic? (CO4)
- a) Add color b) Prevent Degradation
 c) Increase conductivity d) Increase weight
- Q.6 Polypropylene is a _____ polymer. (CO1)
- a) Linear b) Branched
 c) Cross-linked d) none of these

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 The number average molecular weight (\bar{M}_n) = $\frac{\sum n_i M_i}{\sum n_i}$ (True/False) (CO1)
- Where n_i , M_i are number of molecule and molecular weight of i^{th} polymer respectively.
- Q.8 Copolymers are made from single type of monomers. (True/False) (CO1)

(2)

220563C

- Q.9 The monomeric unit for nylon-6 polymer is caprolactam. (True/False) (CO3)
- Q.10 _____ polymerization technique uses a solvent with the monomer. (CO2)
- Q.11 Polyethylene is a thermosetting polymer. (True/False) (CO1)
- Q.12 _____ are additives that give color to plastics.. (Pigments/Stabilizers) (CO4)

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Describe the classification of polymers based on the line structure with examples. (CO1)
- Q.14 Describe the following : (CO1)
- a) Role of free radical in polymer formation
 b) Plastics
- Q.15 Explain the structure, two properties and two uses of polyvinylchloride. (CO3)
- Q.16 Define Polymer and degree of Polymerization with example. (CO1)
- Q.17 Describe step growth polymerization in brief. (CO1)
- Q.18 Describe the calendaring processing technique for polymer production. (CO4)

(3)

220563C