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1st Sem / Plastic Technology

Subject : Introduction to Polymer Science and Technology

Time : 3 Hrs. M.M. : 60

SECTION-A

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

Q.1 With increasing temperature the viscosity of liquid

a) Increases b) Decreases

c) Can not say d) None of these

Q.2 Degree of polymerization

a) Number of repeating unit

b) Number of monomer unit

c) Both A & B

d) None of these

Q.3 Crystalline polymers are

a) Regular molecular size

b) Irregular molecular size

c) Can not say

d) None of these

SECTION-D

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

Q.23 Explain the factors which influence the glass transition temperature (Tg) and write any one technique For its determination.

Q.24 Describe the process of suspension polymerization and its advantages and disadvantages.

Q.25 Explain the technique of gel permeation chromatography (GPC) in detail.

Q.4 Example of copolymer

a) ABS b) HDPE

c) PP d) LDPE

Q.5 Monomer of PVC is

a) Vinyl chloride b) Propylene

c) Ethylene d) All of these

Q.6 Example of natural polymer

a) Cotton b) Leather

c) Jute d) All of these

SECTION-B

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

Q.7 Define crystallisability.

Q.8 What is the relation between Tg and Tm.

Q.9 Give two examples of amorphous polymers.

Q.10 Define copolymer.

Q.11 Define degree of polymerization.

Q.12 What is meant of inhibition?

SECTION-C

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

Q.13 Write a short note on crystalline behavior of polymers.

Q.14 How to determine glass transition temperature (Tg) by difference scanning calorimetry (DSC).

Q.15 What do you mean by reactivity ratio.

Q.16 Write a short note on polymer blends and alloys.

Q.17 Explain the technique of bulk polymerization.

Q.18 Explain Maxwell and Voigt models of Visco-elastic materials.

Q.19 Explain viscosity and their types and write any one of them.

Q.20 Write short note on classification of flow.

Q.21 How to classify materials on the basis of visco-elastic?

Q.22 Explain the reaction mechanism of condensation polymerization.