Q.25 Explain the Importance of Copolymers.
Q.26 Explain polymer dissolution
Q.27 Discuss factor influencing Glass transition temperature.
Q.28 Explain relation between conversion and degree of polymerisation.
Q.29 Explain solvents selection for polymers.
Q.30 Discuss general rules for polymer solubility.
Q.31 Discuss importance of reactivity ratio
Q.32 Discuss Maxwell voigt model of visco-elastic materials
Q.33 Discuss concept of geometrical isomerism
Q.34 Discuss time dependent and time independent behavior of polymers
Q.35 Explain bulk polymerisation technique of polymerisation.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

Q.36 Write short note on:
a) Power law of fluids
b) Advantages and disadvantages of Emulsion polymerisation technique

Q.37 Explain :
a) Different types of copolymers
b) Gel permeation chromatography

Q.38 Discuss :
a) Give difference between amorphous and crystalline polymers .
b) Chain transfer agents

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4th Sem / Plastic
Subject:- Polymer Science and Technology - II

Time : 3Hrs. M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

Q.1 The number 'n' of repeating unit in polymer molecule is called_____
a) degree of polymerization
b) oligomer
c) heavy polymer
d) Repeating unit

Q.2 From the following _____ is the example of biopolymer.
a) Teflon b) neoprene
c) Nylon 6,6 d) DNA

Q.3 The in tiar compounds are_____.
a) Stable b) Highly stable
c) Partially stable d) Unstable

Q.4 Weight average molecular weight_____ on the weight of molecules in a polymer.
a) Dependent b) Non dependent
c) Partially dependent d) None of them

Q.5 Tg stands for_____.

a) Melting temperature
b) Glass transition temperature
c) Processing temperature
d) None of the above

Q.6 From the following which is homopolymer?
a) Bakellite b) Buna- S
c) Dacron d) Butyl rubber

Q.7 Light scattering method is used _____
a) to find concentration
b) to find molecular mass of polymer
c) to test elements
d) to find number of molecules

Q.8 Which of the following polymers is obtained by condensation polymerization?
a) PVC b) Polyethene
c) Poly styrene d) Nylon 6,6

Q.9 What is called to the polymers in which long chain of polymers are held together by weak intermolecular attraction forces?
a) Elastomers
b) fibers
c) thermoplastic polymers
d) All of them

Q.10 Glass transition temperature of polymer is determined by_____.
a) Infrared spectroscopy
b) Differential scanning calorimeter
c) Mass spectrometry
d) Scanning electron microscopy

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 _____ is an example of Inhibitor.

Q.12 The full form of GPC is general Purpose computer (T/F)

Q.13 _____instrument is used in calorimetric method.

Q.14 Macromolecules does not show any _____point.

Q.15 Crystalline polymers show long range order(T/F).

Q.16 _____ is the formula for degree of polymerisation.

Q.17 Give two solvents for PVC.

Q.18 Name any one technique for determination of Glass transition temperature.

Q.19 The process in which the molecular weight of polymer almost remains unchanged with the progress of reaction is a _____.

Q.20 Chain initiation step of free radical polymerization consists of decomposition of initiator and addition of free radical to monomer. (T/F)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Write short note on Ziegler Natta polymerisation catalyst.

Q.22 Discuss the various techniques of polymerization.

Q.23 Explain the Cryoscopy technique of molecular weight determination.

Q.24 Write short note on Glass transition temperature.