

- Q.20 Discuss polymer dissolution process
- Q.21 Explain manufacturing of Poly-ethylene from ethylene monomer
- Q.22 Explain factors and agents for polymer degradation

### SECTION-D

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

- Q.23 Write the structure of the compounds whose name are given below:
- Phenols
  - Aniline
  - Acetic acid
  - Cyclo-pentane
- Q.24 Explain polymer recycling, its need and various methods of recycling
- Q.25 Write short note on :
- Flory-Huggins theory
  - Secondary bonding in polymers and its types

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### 2nd Sem. / Plastic Technology Subject : Polymer Chemistry

Time : 3 Hrs.

M.M. : 60

### SECTION-A

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

- Q.1 Carbons forms \_\_\_\_\_ bonds.
- One
  - Two
  - Three
  - Four
- Q.2 Isomers have same atomic number and different \_\_\_\_\_.
- Mass number
  - Electronic configuration
  - Number of electrons
  - None of the above
- Q.3 General formula for alkane is \_\_\_\_\_.

- a)  $C_nH_{2n}$                       b)  $C_nH_n$   
 c)  $C_nH_{2n+2}$                       d)  $C_nH_{2n-2}$

Q.4 A high molecular weight molecule that is built of a large number of small molecules is known as a \_\_\_\_\_

- a) monomers                      b) polymers  
 c) isomers                      d) tautomers

Q.5 The following plastic bottles are commonly collected for recycling

- a) PET                      b) HDPE  
 c) Both (a) and (b)                      d) PS

Q.6 Nylon is an example of

- a) Polyamide                      b) Polyester  
 c) Polyethene                      d) Polysaccharide

### SECTION-B

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

Q.7 Functional group of acid is \_\_\_\_\_.

Q.8 Resin identification code for PET is \_\_\_\_\_.

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222224

Q.9 Suffix for compound having double bond is \_\_\_\_\_.

Q.10 \_\_\_\_\_ polymer is prepared by Methyl Methacrylate

Q.11 Fourth member of alkene series is \_\_\_\_\_.

Q.12 Addition of Hydrogen is called \_\_\_\_\_.

### SECTION-C

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

Q.13 Explain classification of organic compounds (in brief)

Q.14 Write general formula for:

- a) Alcohols                      b) ethers  
 c) ketones                      d) aldehydes

Q.15 Explain Geometrical isomerism of polymers

Q.16 Compare secondary bonding with primary bonding

Q.17 Discuss concept of macromolecules

Q.18 State properties and applications of Acrylonitrile

Q.19 Explain crystalline and amorphous structure of polymers.

(3)

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