

Q.21 What is difference between polymer degradation and polymer stabilization?

Q.22 Write the structure of

- a) Ethanol
- b) Vinyl chloride

### SECTION-D

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

Q.23 What is the need of polymer recycling? Explain primary recycling, secondary recycling, tertiary recycling.

Q.24 Write the complete polymer dissolution process.

Q.25 What are organic compounds?

- a) Define open ended organic compounds.
- b) Define closed ended organic compounds.  
Give one example of each.

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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 Polymers are

- a) Micromolecules      b) Macromolecules
- c) Atoms                      d) Protons

Q.2 The effect of M.W. of polymers on dissolution time is

- a) The dissolution time increases with increase in M.W.
- b) The dissolution time decreases with increase in M.W.
- c) The dissolution time will remains unaffected with increase in M.W.
- d) None of the above

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- Q.3 The major source of monomers is
- a) Trees                              b) Crops
  - c) Petrochemicals              d) Animals

- Q.4 Recycling of polymers
- a) Increases plastics waste
  - b) Decreases plastics waste
  - c) Increases pollution
  - d) None of above

- Q.5 Isocyanates are
- a) Highly toxic                      b) Not toxic
  - c) Mildly toxic                      d) None of above

- Q.6 R-OH is a functional group of
- a) Acids                                b) Alcohols
  - c) Alkanes                              d) Alkynes

### SECTION-B

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

- Q.7 Expand the term IUPAC.
- Q.8 Write the functional group present in acids.
- Q.9 Secondary bonding forces are stronger than primary bonding forces. (T/F)

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- Q.10 Define the term macromolecules.
- Q.11 Write the formula of ethylene.
- Q.12 Define the term polymer.

### SECTION-C

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

- Q.13 What is degraded polymer? Write two factors/agents which affect polymer degradation.
- Q.14 What are petrochemicals, what is their use in plastics industry?
- Q.15 Write the affect of structure of polymer on dissolution of polymers.
- Q.16 With one example define cis and trans isomerism.
- Q.17 Define polyfunctional compounds, give one example.
- Q.18 What is difference between intermolecular and intramolecular forces. Give one example of each.
- Q.19 Define the term viscosity. How the viscosity of dilute polymer solution is measured?
- Q.20 Write the manufacture and two applications of VC monomers.

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