

- Q.24 Describe the different types of polymers in brief?
 Q.25 How can you reduce adverse effects of environment on plastics?
 Q.26 Explain the properties and uses of polystyrene in brief.
 Q.27 Discuss the industrial uses of Nylon 6?
 Q.28 What are the advantages and disadvantages of bulk polymerization?
 Q.29 Define and discuss initiators in brief?
 Q.30 Explain the condensation polymerization in brief?
 Q.31 Discuss the weight average molecular weight of polymers in brief.
 Q.32 Explain the concept of copolymerization in brief.
 Q.33 How average molecular weight and molecular weight distribution are related to each other, discuss in brief?
 Q.34 Discuss the injection moulding process in brief?
 Q.35 Write various applications of Bakelite?

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
 Q.36 Describe the suspension polymerization process in detail with the help of a neat diagram?
 Q.37 Why additives are used in plastics? Discuss any two types of additives used in plastic industry in detail?
 Q.38 Discuss the polymer synthesis using chain growth polymerization in detail with the help of a suitable example?

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4th Sem / Chem Subject:- Polymer Technology

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Which type of fibers is made from polyamides?
 a) rayon b) dacron
 c) nylon d) spandex
 Q.2 Suspension polymerization is also known as?
 a) pressure polymerization
 b) joint polymerization
 c) micelle polymerization
 d) pearl polymerization
 Q.3 What is chemical name teflon?
 a) polytetrafluoroethylene
 b) polytrifluoroethylene
 c) polydifluoroethylene
 d) polymonofluoroethylene
 Q.4 Which of the following polymer is prepared by using condensation polymerisation?
 a) polyethylene b) bakelite
 c) teflon d) polyvinylchloride

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- Q.5 Adipic acid is used as a monomer in the preparation of which of the following polymers?
a) Polyethylene b) Nylon 6,6
c) Polyester d) Bakelite
- Q.6 Step growth polymerization is also called?
a) condensation polymerization
b) copolymerization
c) addition polymerization
d) none of the above
- Q.7 Polymer processing technique used to produce electrical fitting PVC pipe is?
a) Injection moulding b) blow moulding
c) extrusion d) calendering
- Q.8 The properties of the polymer can be assessed through?
a) weight average molecular weight
b) viscosity average molecular weight
c) number average molecular weight
d) all of the above
- Q.9 How many monomer types are used in the preparation of polyvinylchloride?
a) 1 b) 2
c) 3 d) 4
- Q.10 Which of the following additive is used to improve flexibility of plastics?
a) stabilizer b) filler
c) plasticizer d) cross linking agent

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 What is the purpose of heat stabilizers used in material compounding?
- Q.12 Define the copolymer?
- Q.13 Which polymerization technique is used to produce polyethylene?
- Q.14 What is the functionality of vinyl chloride?
- Q.15 PVC is formed by which type polymerization?
- Q.16 Which type of structure Bakelite polymer possess?
- Q.17 What are elastomers?
- Q.18 Name the process in which chemical cross links are formed in the thermoset plastics by heat and pressure?
- Q.19 Write the name of a resin which is formed by condensation polymerization?
- Q.20 Which additive is used to reduce friction in pipe manufacturing?

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Discuss the structure and properties of polyvinyl chloride?
- Q.22 Discuss the importance of degree of polymerization in brief.
- Q.23 What is difference between solution polymerization and emulsion polymerization?