

- No. of Printed Pages : 4 180544/120544/030564A
Roll No. /545

Time : 3Hrs. M.M. : 100

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) polytetrafluoroethene
b) polytrifluoroethene
c) polydifluoroethene
d) polymonofluoroethene
- Q.4 Which of the following polymer is prepared by using condensation polymerisation?
a) polyethylene b) bakelite
c) teflon d) polyvinylchloride

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?

- 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

(2) 180544/120544/030564A
/545

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?

(3) 180544/120544/030564A
/545