



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE
(Grant-in-Aid)
Affiliated to Sardar Patel University
VALLABHVIDYANAGAR-388120



Bachelor of Science (Semester VI) Internal Examination MARCH-2026
US6MICHE03: POLYMER SCIENCE

Date: 09-03-2026

Time: 10: 45 A.M. to 11:45 A.M.

Total marks: 20

Q:1 Choose the correct Answer of Following Multiple Choice Questions.

06 Marks

- Which of the following is a natural polymer?
 - Cellulose
 - Nylon-6,6
 - PVC
 - Polythene
- Co-ordination polymerization involves _____
 - Radical initiation
 - Ionic initiation
 - Transition metal catalysts
 - High temperature only
- The major classification of polymers based on origin includes _____
 - Natural, organic, inorganic
 - Natural, synthetic, semi-synthetic
 - Organic, inorganic, semi-synthetic
 - Marine, terrestrial, synthetic
- Main raw material for epoxy resin is _____
 - Bisphenol-A
 - PVC
 - Urea
 - Polyisoprene
- Polyurethane reaction type is _____
 - Addition polymerization
 - Condensation
 - Radical polymerization
 - Ionic polymerization
- SBR stands for _____
 - Styrene Butadiene Rubber
 - Styrene Benzene Rubber
 - Silicone Butadiene Resin
 - None



Q:2 Answer the following long Question (any one).

07 Marks

[A] Define polymers. Write the classification polymers based on Mode of Formation.

OR

[A] Describe the mechanism for free radical Polymerisation.

Q:2 Answer the following long Question (any one).

07 Marks

[A] Explain the Raw material, manufacture, properties and application of PF (Novalac).

OR

[A] Describe the manufacturing process for Polyurathane.



A Charutar Vidya Mandal's Institution
V.P. & R.P.T.P. SCIENCE COLLEGE

(Grant-in-Aid)

Affiliated to Sardar Patel University
VALLABHVIDYANAGAR-388120



Bachelor of Science (Semester VI) Internal Examination MARCH-2026
US6MICHE03: POLYMER SCIENCE

Date: 09-03-2026

Time: 05 minutes

Student's Roll No.:

Student's Signature:

Total Marks: 05

Obtained Marks:

Examiner's Signature:

Quiz test

Q: Fill in the Blanks.

1. Polymers formed from identical monomers are called _____
(Homopolymers/Co-Polymers).
2. Ziegler-Natta catalyst is composed of _____
(AlCl_3 and HCl/TiCl_4 and AlEt_3).
3. The catalyst used in Novolac formation is _____
($\text{ZnCl}_2/\text{H}_2\text{SO}_4$).
4. Polyurethane formation involves _____
(-COOH group/ -NCO group).
5. Thiokol formed from _____
(Sodium polysulfide + organic dihalide/Melamine + formaldehyde).

