

VITHALBHAI PATEL & RAJRATNA P.T. PATEL SCIENCE COLLEGE
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4.Y. B.Sc. SEM: VI

INTERNAL TEST

DATE: 08th March 2019

SUB: Industrial chemistry

TIME: 10:00 am to 12:00 pm

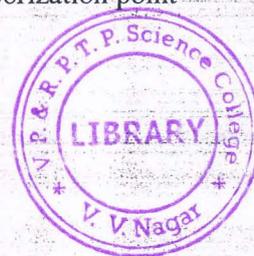
SUB CODE: US06CICV03

TOTAL MARKS: 50

Q1. MCQ

08

1. Most polymers are synthesized from low molar mass molecules are called
(a) monomer (b) polymer (c) oligomer (d) trimer
2. Fibers have low extensibility ranging from
(a) 10-20% (b) 100% (c) 100-200% (d) b&c
3. High concentration of initiator in addition polymerization will lead to..... in molecular mass of polymer
(a). increases (b). decreases (c). no changes (d). all the above
4. Temperature boundary between plastic and elastic phase of polymer is denoted as ,.....
(a). glass transition temperature (b). melting point (c). boiling point (d). vaporization point
5. What is the phenol formaldehyde ratio for produced resol?
(a) 1:1.4 (b) 1:0.8 (c) 8:1 (d) 1:1
6. Formaldehyde prepared by _____ process of methanol.
(a) oxidation (b) reduction (c) hydrogenation (d) sulfonation
7. SANABS & SBR are the copolymer of _____
(a) Styrene (b) ethylene (c) propylene (d) poly amide
8. Nylons are _____
(a) poly amide (b) poly carbonate (c) amino resin (d) none of this



Q.2 Answer the following in short. (Attempt five, each two marks)

[10]

- (1) Give the classification of polymer based on its thermal response.
- (2) Define elastomers
- (3) What is glass transition temperature?
- (4) Explain the term crystallinity and degree of crystallinity.
- (5) Give the reaction condition of phenol formaldehyde novolac and resol.
- (6) Give the preparation of isocyanate by phosgenation process.
- (7) Compare the structure of PVC with that of polyethylene.
- (8) Give the name of the important copolymers of styrene.

Q.3 Write a note on ziegler-natta catalyst polymerization.

[08]

OR

Q.3 Give the comparison between addition & condensation polymerization

[08]

Q.4 Explain the weight average concept in detail

[08]

OR

Q.4 Explain the number average concept in detail

[08]

Q.5 Give the manufacturing process of phenol formaldehyde resol.

[08]

OR

Q.5 Give the manufacturing process of maleimide formaldehyde resin.

[08]

Q.6 With suitable flow diagram, describe a commercial process for the mfg of isotactic polypropylene.

[08]

OR

Q.6 With suitable flow diagram, explain briefly how vinyl chloride monomer is prepared from acetylene

[08]