

AU – 2708

Fifth Semester B. Tech. (Polymer/Plastic Technology) (CGS) Examination

POLYMER MATERIALS

Paper – 5 PP 02

(USC – 11116)

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) Answer **Three** questions from Section A and **Three** questions from Section B.
(2) Due credit will be given to neatness and adequate dimensions.
(3) Diagrams and Chemical equations should be given wherever necessary.
(4) Illustrate your answer wherever necessary with the help of neat sketches.
(5) Discuss the reaction, mechanism wherever necessary.
(6) Use pen of Blue/Black ink/refill only for writing the answer book.

SECTION A

1. (a) Discuss history and development of polymer materials. 7
(b) Distinguish between thermoplastics and thermosetting polymers on the basis of origin, tacticity and thermal response with examples. 6

OR

2. (a) Discuss preparation of LDPE with the help of schematic flow diagram in brief. 7
(b) Explain important properties and uses of HDPE. 6
3. (a) How would you prepare PVC using bulk polymerisation method ? Discuss with the help of flow sheet. 7
(b) State viscosity measurement method used for molecular weight determination of PVC. 6

OR

4. (a) Explain the preparation, properties and uses of CAB polymer. 6

AU-2708

P.T.O.

- (b) Why compounding is necessary in PVC ? Discuss the role of compounding ingredient in PVC. 7

5. (a) What is HIPS ? State preparation of HIPS. Compare properties of HIPS with ordinary polystyrene. 8
(b) Explain important properties and uses of polystyrene. 6

OR

6. (a) What is EPS ? State preparation of EPS using steam molding process. 8
(b) State important properties and applications of SAN. 6

SECTION B

7. (a) Compare engineering plastics with commodity plastics with suitable examples. 6
(b) What is ABS ? How would you prepare ABS ? State important uses of ABS. 8

OR

8. (a) Discuss preparation and properties of PPO. 6
(b) What are fluoro polymers ? Discuss preparation, properties and uses of PTFE (Teflon) http://www.sgbauonline.com 8

9. (a) What are the different ingredients used in Phenol formaldehyde moulding powder ? Discuss their role in compound of PF moulding powder. 9
(b) Comparison of Phenol formaldehyde with urea formaldehyde resin. 4

OR

10. (a) Discuss chemistry of urea formaldehyde resin. Discuss the role of different ingredients which are used in urea formaldehyde moulding powder. 9

(b) Explain important uses of melamine formaldehyde resin. 4

11. (a) Discuss the preparation of celloxy resin. 6

(b) Discuss chemistry and moulding powder preparation of epoxy resin. 7

OR

12. (a) State raw materials used for epoxy resin preparation with its chemical structure. 6

(b) Compare epoxy resin with unsaturated polyester resin in terms of properties and uses. 7



<http://www.sgbauonline.com>

Whatsapp @ 9300930012

Your old paper & get 10/-

पुराने पेपर्स भेजे और 10 रुपये पायें,

Paytm or Google Pay से