

Roll No.

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B

2587

Part-C : (24 marks) contains six questions two from each unit. Candidate is required to attempt three questions one from each unit. Each question is of 8 marks (400 words).

**M.Sc. (Applied Chemistry) (Semester IV)
EXAMINATION, 2018**

Paper-M4AC16-ET-21A

POLYMER CHEMISTRY-I

Time allowed : Three hours

Maximum marks : 40

Note : The question paper is divided into three parts, Part-A, Part-B and Part-C.

Part-A : (8 marks) is compulsory and contains 8 questions (20 words each). Each question is of one mark.

Part-B : (8 marks) is compulsory and contains four questions. Candidate is required to attempt all four questions. Each question is of two marks (50 words each).

Part-A (Compulsory)

1. Define thermoforming. 1
2. Give two examples of fire retarding polymers. 1
3. What do you mean by calendaring? 1
4. What is the average molecular weight concept with respect to polymers? 1
5. Define glass transition temperature (T_g). 1
6. Define polydispersity. 1
7. What do you mean by biomedical polymers? 1
8. Write down the uses of silicon polymers. 1

Part-B (Compulsory)

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9. Describe the blow moulding technique. 2
10. Discuss tear resistance and abrasion resistance in physical testing of polymers. 2
11. Write short note on epoxy resins. 2
12. Describe compounding. 2

Part-C

Unit-I

13. Write short notes on the following :

- (i) Die casting and film coating
- (ii) Configuration of polymer chains 4+4

14. Describe the various process of fibre spinning. 8

Unit-II

15. Give a brief account of measurement of molecular weight by end group and light scattering method. 8

16. Explain number average, weight average and viscosity average molecular weight of polymers. 8

Unit-III

17. Write short notes on the following :

- (i) Electrically conducting polymers
- (ii) Liquid crystal polymers 4+4

18. Explain the preparation, properties and uses of polyamides and polyesters. 8