

Roll No :- \_\_\_\_\_

**3630**

**M.Sc. (Applied Chemistry) (Semester-IV)  
EXAMINATION, 2019  
Paper-M4AC16-ET-21A  
(Polymer Chemistry-I)**

Time Allowed - Three Hours  
Maximum Marks - 40

*Note : This question paper is divided into three parts :*

*Part-A, Part-B and Part-C*

**Part-A (Compulsory) (Marks : 8)**

*Answer all eight questions (20 words each).*

*Each question carries equal marks.*

**Part-B (Compulsory) (Marks : 8)**

*Answer all four questions (50 words each). Each question carries equal marks.*

**Part-C (Marks : 24)**

*Answer any three questions (400 words each). selecting one question from each unit. Each question carries equal marks.*

**Part-A (Compulsory)**

1. Define Elastomers. 1
- 2- Define the Injection moulding. 1
- 3- What do you mean by Polydispersity. 1
- 4- What do you mean by heat of fusion. 1
- 5- Define the Fatigu impact. 1
- 6- Define abrasion resistance. 1
- 7- Define the reinforcingand. 1
- 8- What do you mean by epoxy resins. 1

**Part-B**

- 9- Describe the rotational casting. 2
- 10- Discuss the effect of chain flexibility. 2
- 11- Write short note on X-ray diffraction study. 2
- 12- Discuss the Polyvinyl chloride and Polyesters. 2

**Part-C**

**Unit-I**

- 13- Write short notes on the following.
  - i) Extrusion moulding.

ii) Film Casting.

4+4=8

**OR**

14- Discuss the various process of entropy and heat of fusion with examples. 8

**Unit-II**

15- Discuss the various process of Poly dispersion - average molecular weight concept with example.8

**OR**

16- Write a short notes on:

i) Osmotic and Ultra centrifugation methods.

ii) light Scattering.

4+4=8

**Unit-III**

17- Discuss the Preparation, properties and uses of Phenolic resins and silicon polymers. 8

**OR**

18- Write short notes on the following:

i) Fire retarding Polymers.

ii) Biomedical Polymers.

4+4=8