

2/21

0402E1412

Candidate's Seat No : _____

MSc Sem.-1 Examination

403

Polymer Science

February-2025

Time : 2-30 Hours]

[Max. Marks : 70

QUESTION – 1 Write the following.

(i) Describe the essential characteristics and molecular architecture of fiber forming polymers.

7 MARKS

(ii) Discuss in detail about optical fibers.

7 MARKS

OR

(i) Differentiate between natural and synthetic polymers.

7 MARKS

(ii) Explain wet spinning of fibers with a neat diagram

7 MARKS

QUESTION – 2 Write the following.

(i) Describe the physical structure of natural and man-made fibers.

7 MARKS

(ii) Explain wet spinning of fibers with schematic diagram.

7 MARKS

OR

(i) Define Tactile, Shrinkage and Uniformity properties of polymeric fibers.

7 MARKS

(ii) Differentiate between Nylon 6 and nylon 66 fibre.

7 MARKS

QUESTION – 3 Write the following.

(i) What is fiber? Discuss melt & dry spinning with a neat diagram.

7 MARKS

(ii) Discuss the common types of finishes applied to textile fibers.

7 MARKS

OR

(i) Give brief outline of manufacture of textiles.

7 MARKS

(ii) Write short note on Dyeing and Printing.

7 MARKS

QUESTION – 4 Write the following.

(i) Write down the preparation properties and applications of Metallic fiber.

7 MARKS

(ii) Write down the preparation, properties and applications of Glass fiber.

7 MARKS

OR

(i) Write down the preparation, properties and applications of Boron fiber.

7 MARKS

(ii) Write down the preparation, properties and applications of Carbon fiber.

7 MARKS

QUESTION – 5 Attempt any seven out of twelve.

14 MARKS

1. What is total internal reflection?

2. What is attenuation?

3. Durethan is trade name of which polymer?

4. Adiprene is trade name of which polymer?

5. What are monomers of PET?

6. Give monomers of Polyurethane.

(P.T.O)

E1412-2

7. What are monomers of nylon 6,8?
 8. Nylon 6 can be synthesized by which polymerization reaction?
 9. Why is Rayon called Regenerated cellulose?
 10. Terrycot is made by mixing two types of fibres.
 11. PBT stands for_____.
 12. Give difference between fiber and yarn.
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