

Roll No.

Total Pages : 03

Sep-21-00054

B. Tech. EXAMINATION, 2021

Semester IV (CBCS)

MAN MADE FIBRE

TE-401

Time : 2 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D.
Q. No. 9 is compulsory.

Section A

1. Define the man-made fibre. Give a flow chart of classification of man-made and natural fibres. 15

2. Discuss the synthesis of caprolactum from phenol and aniline. 15

Section B

3. Discuss the construction and importance of quenching chamber. 15
4. What are the difference between nylon 6 and nylon 66 ? Explain process of manufacturing of these fibres. 15

Section C

5. Explain the principle of wet and dry spinning system. Compare wet and dry spinning system. 15
6. What is heat setting ? Explain various influencing parameters of heat setting. 15

Section D

7. Explain properties and applications of carbon and glass fibres. 15
8. Discuss methods of measurement of molecular weight. 15

(Compulsory Question)

9. Attempt all questions : 1.5×10=15
- (a) What are the difference between viscose rayon and tencel fibre ?
- (b) What are the applications of flame retardant fibres ?
- (c) Name various drawing systems.
- (d) What is gel spinning ?
- (e) Why are spin finishes required ?
- (f) Name the starting material required for manufacturing of polyester fibre.
- (g) Draw various shapes of spinnerate holes.
- (h) What are the elastomeric fibres ? Name at least *two* elastomeric fibres.
- (i) What are bicomponent fibres ?
- (j) What are aramid fibres ? Name *two* applications of aramid fibres.