

Code No: 154CW

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech II Year II Semester Examinations, September/October - 2023****MAN MADE FIBRE TECHNOLOGY****(Textile Engineering)****Time: 3 Hours****Max. Marks: 75****Note:** i) Question paper consists of Part A, Part B.

ii) Part A is compulsory, which carries 25 marks. In Part A, answer all questions.

iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

**PART – A****(25 Marks)**

- 1.a) Classify :Synthetic and Regenerated fibre. [2]
- b) What do you mean by Geometry and Substrate in manmade fibres? [3]
- c) Identify the types of extruders. [2]
- d) Explain the concept of “NDR” in the context of drawing process. [3]
- e) How do you estimate the Spin finishes percentage? [2]
- f) Classify the Spin finishes. [3]
- g) What are Micro fibres? [2]
- h) Mention the applications of Nano fibres in various sectors. [3]
- i) List the Catalysts employed in Trans-etherification of Polyester. [2]
- j) How Surface modification of Polyester has influence on Polyester properties. [3]

**PART – B****(50 Marks)**

2. With a neat sketch explain the principles of Wet spinning and Dryjet wet spinning. [10]  
**OR**
3. What are the general steps involved in manufacture of man-made fibres? How the determinants will influence the properties of the end product? [10]
4. Write note on the Construction and, Cleaning methods of Spinnerettes. [10]  
**OR**
5. What is Drawing and Streaching? How the parameters are influencing the product quality and production. [10]
6. Discuss: Objectives, types of spin finishes and problems of application and removal of spin finish. [10]  
**OR**
7. Give the all stages, explain the manufacture of Viscose Filament manufacture. [10]
8. Explain the production of PP fibres on a large scale. [10]  
**OR**
9. How Micro fibres are produced on a mass scale? Discuss. [10]
10. Discuss the role of Surface modification of Polyester. [10]  
**OR**
11. How Polyester is produced? Giving equations explain the methods. [10]