

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III EXAMINATION – SUMMER 2025

Subject Code:3132906

Date:31-05-2025

Subject Name:Textile Materials

Time:02:30 PM TO 05:00 PM

Total Marks:70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.
- 5.

	MARKS
Q.1 (a) Define textile fibres.	03
(b) Write briefly about methods of harvesting of cotton.	04
(c) Explain the morphological structure of wool.	07
Q.2 (a) State the chemical properties of hemp fibres.	03
(b) What are the sources and applications of sisal fibres.	04
(c) Discuss the advantages and disadvantages of manmade fibres.	07
OR	
(c) Write a short note on high performance fibres.	07
Q.3 (a) What is the significance of the property molecular weight in textile fibres?	03
(b) Write briefly about degumming process of silk.	04
(c) Explain the morphological, physical and chemical structure of cotton.	07
OR	
Q.3 (a) State the essential and desirable properties in textile fibres.	03
(b) Write briefly about organic cotton.	04
(c) Which are the different types of silk? Explain the physical and chemical structure of silk.	07
Q.4 (a) State the raw material and manufacturing process of viscose fibres.	03
(b) What are the special features of modal fibres?	04
(c) Write a short note on jute fibres.	07
OR	
Q.4 (a) State the features of lyocell fibres.	03
(b) Compare natural fibres and manmade fibres.	04
(c) Write a short note on coir fibres.	07
Q.5 (a) State the chemical properties of nylon fibres.	03
(b) Write briefly about polypropylene fibres.	04
(c) Explain the melt spinning process with a neat sketch.	07
OR	
Q.5 (a) Which are the raw materials used and manufacturing process of polyester fibres.	03
(b) Write briefly about acrylic fibres.	04
(c) Explain any solution spinning process with a neat sketch.	07
