

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-III(New) EXAMINATION – SUMMER 2016**

**Subject Code:2132901****Date:02/06/2016****Subject Name:Textile Fibres****Time:10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

<b>Q.1</b>	<b>Short Questions ( Each carry one mark)</b>	<b>14</b>
	1 Define: Textile fibre	
	2 Give densities of cotton and polyester fibers.	
	3 Draw cross section of wool and viscose rayon fibres.	
	4 Name the scientists who invented viscose rayon fiber.	
	5 Define: Staple length	
	6 What it means by immature fiber ?	
	7 Give the melting temperature of polyester & nylon fibers.	
	8 Which is the lightest textile fiber? Why ?	
	9 Define the term : Monofilament	
	10 Which are the starting material required to produce acrylic fibers?	
	11 Name any two bast fibers.	
	12 Give densities of silk and acrylic fibers.	
	13 What it means by a word “ Porosity”?	
	14 Give the moisture regain percentage of cotton and polyester.	
<b>Q.2</b>	(a) State merits and demerits of natural fibers.	<b>03</b>
	(b) Briefly describe about Cortex of wool fiber.	<b>04</b>
	(c) Explain the sericulture of silk.	<b>07</b>
	<b>OR</b>	
	(c) Give broad classification of Textile Fibres.	<b>07</b>
<b>Q.3</b>	(a) Describe about cultivation of jute fibre.	<b>03</b>
	(b) Explain silk reeling process.	<b>04</b>
	(c) Discuss in detail about primary wall & lumen in cotton morphology	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Give composition of wool fiber.	<b>03</b>
	(b) Write a note on Milk fiber.	<b>04</b>
	(c) Explain in detail about cuticle & secondary wall in morphology of cotton fibre.	<b>07</b>
<b>Q.4</b>	(a) State merits and demerits of man-made fibers.	<b>03</b>
	(b) Compare addition and condensation polymerization.	<b>04</b>
	(c) Explain manufacturing process of polyester fibres.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Define: Monomer, Polymer & DP.	<b>03</b>
	(b) Write a note on Wet spinning.	<b>04</b>
	(c) Explain the spinning of viscose rayon .	<b>07</b>
<b>Q.5</b>	(a) Why fibers are fiborious?	<b>03</b>
	(b) Write a note on Melt spinning.	<b>04</b>
	(c) Discuss in detail about VK tube method for Nylon fibre.	<b>07</b>
	<b>OR</b>	
<b>Q.5</b>	(a) Write a note on Molecular weight.	<b>03</b>

- (b) Give any four advantages of TPA over DMT . **04**
- (c) Discuss the physical & chemical properties of polyester fibre. **07**

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