

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2023**

**Subject Code:3172917****Date:01-12-2023****Subject Name:Process and Quality Control in Textile****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.
4. Simple and non-programmable scientific calculators are allowed.

		<b>MARKS</b>
<b>Q.1</b>	(a) How the reed parameters affect the weaving performance?	<b>03</b>
	(b) Discuss the various ring frame parameters responsible for the generation of yarn hairiness.	<b>04</b>
	(c) Discuss the role of machinery and labour on productivity of a weaving mill.	<b>07</b>
<b>Q.2</b>	(a) State the importance of process and quality control in textile.	<b>03</b>
	(b) Discuss the control of mixing quality through fiber characteristics.	<b>04</b>
	(c) Explain in detail the methods of controlling the generation of neps at blow room, card and comber.	<b>07</b>
<b>OR</b>		
	(c) Discuss in detail about warp steaks & reediness along with its causes and remedies.	<b>07</b>
<b>Q.3</b>	(a) What is yarn realization? Discuss the parameters affecting the yarn realization.	<b>03</b>
	(b) Explain the control of variability of lea strength.	<b>04</b>
	(c) Discuss the technological considerations with reference to control of comber waste.	<b>07</b>
<b>OR</b>		
<b>Q.3</b>	(a) Discuss in brief the control of blow room waste.	<b>03</b>
	(b) Explain the steps involved in instrumental evaluation of quality of mixing.	<b>04</b>
	(c) Discuss the various factors causing within bobbin count variation.	<b>07</b>
<b>Q.4</b>	(a) What are the different types of yarn irregularity?	<b>03</b>
	(b) Discuss briefly optimization of cleaning at cards.	<b>04</b>
	(c) Explain the working principle of the digital online system for yarn clearing and quality control in modern winding.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	(a) State the causes of thick and thin places in yarn.	<b>03</b>
	(b) Explain the key variables for process control in spinning.	<b>04</b>
	(c) Explain the effect of immersion roller, squeezing roller, & size paste level on average size pick up in sizing.	<b>07</b>

- Q.5** (a) Write any two parameters to improve the build of the pirn package. **03**  
(b) Write in short on causes & remedies for weft bar damage. **04**  
(c) Discuss in detail about the quality of warping beam. **07**

**OR**

- Q.5** (a) What are the causes of tightness/slackness in shed connections? How ratio of front and back heald shaft lift is calculated? **03**  
(b) Discuss the causes and remedies for small weft loop damage. **04**  
(c) Explain the various aspects of controlling unwinding tension at winding process. **07**

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