

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III (NEW) EXAMINATION – WINTER 2023****Subject Code:3132902****Date:16-01-2024****Subject Name:Yarn Manufacture I****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.

		MARKS
Q.1	(a) What are the objectives of the Card?	03
	(b) What is the function of the coarse cleaning machine in blow room line? Name the different coarse cleaning machines used in Blow room.	04
	(c) Discuss the latest developments in ginning and baling machines.	07
Q.2	(a) Draw a flow chart for showing sequence of machinery used for producing ring spun yarn.	03
	(b) Briefly discuss about pre and post ginning process.	04
	(c) What is the function of automatic bale opening machine? With a suitable sketch, explain the working principle of an automatic bale opening machine.	07
OR		
	(c) With a suitable sketch, explain the working principle of a mixing machine used in modern Blow room line.	07
Q.3	(a) State the difference between blending and mixing.	03
	(b) Explain the material transport system used in the modern Blow room line.	04
	(c) With a suitable sketch, explain the working of dust removal system used in modern Blow room line.	07
OR		
Q.3	(a) Draw labelled figures to show any two opening devices used in Blow room line.	03
	(b) Give the definition of tex and denier.	04
	(c) With a suitable diagram, explain the construction and working of Macarthy ginning machine.	07
Q.4	(a) What is the function of grid bars. Draw the different types of grid bars used in card.	03
	(b) What is grinding? Explain the different types of grinding tools.	04
	(c) With a suitable sketch, explain the construction and working of chute feed system.	07

OR

- Q.4** (a) What is the function of Autoleveller? Which type of autoleveller is used in card? **03**
- (b) Discuss the 'Heel and Toe arrangement' of flats in Card. **04**
- (c) With a suitable sketch, explain the working principle of Card. **07**
- Q.5** (a) Write the formula to calculate card sliver production rate in Kg/shift. **03**
- (b) Discuss the advantages and disadvantages of lap feed system. **04**
- (c) Discuss the recent developments in Card. **07**
- OR**
- Q.5** (a) Discuss briefly the necessary measures to be taken while processing manmade fibers in Card. **03**
- (b) Discuss the Card sliver coiling mechanism. **04**
- (c) Discuss the common defects and remedies in Card sliver. **07**
