

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– III (New) EXAMINATION – WINTER 2019****Subject Code: 3132902****Date: 28/11/2019****Subject Name: Yarn Manufacture I****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.

		MARKS
Q.1	(a) What are the objectives of ginning machine?	03
	(b) With suitable sketches discuss the modern development in Cylinder region of Card.	04
	(c) Explain the passage of material on Card with a labelled figure.	07
Q.2	(a) What are the objectives of Card? Why Carding machine is known as the heart of a spinning mill?	03
	(b) What are the advantages and disadvantages of manual picking and machine picking of cotton fibers?	04
	(c) Which fibers are suitable to process in Macarthy ginning machine? With a suitable sketch show the construction and working of Macarthy ginning machine.	07
OR		
	(c) Which fibers are suitable to process in Saw ginning machine? With a suitable sketch show the construction and working of Saw ginning machine.	07
Q.3	(a) What are the objectives of Blow room?	03
	(b) What is the function of coarse cleaning or (Pre cleaner) machine in Blowroom line? Draw a labelled figure to show any one coarse cleaning machine.	04
	(c) Differentiate between blending and mixing? Explain any one mixing machine used in blow room line with a labelled figure.	07
OR		
Q.3	(a) What is the function of Grid Bar? With suitable sketches show the different type of Grid bars.	03
	(b) With a suitable diagram explain the construction and working of any one Fine cleaning machine used in Blowroom line.	04
	(c) What is the function of Bale opener in Blowroom line? Explain the construction and working of an automatic bale opener with a labelled figure.	07
Q.4	(a) What is the function of Autoleveller? Which type of autoleveller is used in Card?	03
	(b) Define Grinding process? With a suitable sketch explain any one grinding tool used in Card.	04
	(c) Explain Carding and stripping action in Card with suitable figures. Also, draw figures to show the different types of Card clothing.	07

OR

- (a) Draw a flowchart to show the passage of material in Tandem card. **03**
- (b) Explain the working of a dust removal system used in modern Blowroom line with a labelled figure. **04**
- (c) Draw a labelled figure of chute feed system. Discuss the advantages and disadvantages of modern chute feed system over a conventional lap feed system? **07**
- Q.5** (a) Draw labelled figures to show any two opening devices used in Blow room line. **03**
- (b) In a Blowroom process, trash content in raw cotton and lap was 5% and 1% respectively. Calculate the cleaning efficiency of Blow room line. **04**
- (c) What are the objective of coiling mechanism? What are the different types of coiling mechanisms used in Card? Draw the sketches showing different coiling mechanisms. **07**
- OR**
- Q.5** (a) With a suitable sketch discuss the construction of flats in Carding machine. **03**
- (b) Write in brief about the common defects and its remedies observed in Card sliver. **04**
- (c) Calculate production of Carding machine in Kilograms (Kgs) from the following data : **07**
- (i). Doffer diameter: 28 inches, (ii). Doffer speed: 30 rpm, (iii). Working Hours: 8 hours, (iv). Efficiency: 95%, and (v). Hank of sliver (Ne): 0.12.
