

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
Bachelor of Engineering - SEMESTER - III EXAMINATION - WINTER 2025

Subject Code: BE03029021

Date: 17-12-2025

Subject Name: Yarn Manufacturing Techniques - 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) State any three basic operations performed in the blow room.	03
(b) Explain chute feed methods in carding.	04
(c) Elaborate the construction, operating principle, and maintenance of revolving flat cards.	07
Q.2 (a) State the objectives of cleaning in blow room.	03
(b) Compare Coarse cleaning and Fine cleaning machines.	04
(c) Give list of process sequence for manufacturing combed yarn with input and output of each process.	07
OR	
(c) With neat diagrams, explain the sequence of machines in a modern blow room line and discuss the role of each machine.	07
Q.3 (a) What are the objects of speed frame machine.	03
(b) What are the basic parameters for selecting feed material to start yarn manufacturing?	04
(c) What are the technological changes occurred in modern carding machine.	07
OR	
(a) State functions of the carding cylinder.	03
(b) State four benefits of using blending machines in spinning.	04
(c) Describe the working principle, construction, and adjustment of the grid in blow room; include its effect on cleaning efficiency.	07
Q.4 (a) What is the role of a lick-in in carding?	03
(b) Explain the principle of automatic bale opening with a neat sketch.	04
(c) What four factors influence the opening capacity of a blow room line?	07
OR	
(a) Explain the function of grid bars.	03

- (b) With neat sketch explain passage of material through draw frame machine. 04
- (c) With neat sketch explain passage of material through ring frame machine. 07
- Q.5** (a) Give list of key components from blow room machines. 03
- (b) State four common faults in blow room processing and their impacts. 04
- (c) Illustrate the principle and role of autoleveling equipment in carding machinery. 07

OR

- (a) Briefly explain three main zones of a carding machine. 03
- (b) Discuss the objects of comber machine. 04
- (c) Explain the types and functions of card clothing. How do they impact sliver and yarn quality? 07
