

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-III (NEW) EXAMINATION – WINTER 2024****Subject Code:3132902****Date:26-11-2024****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) Draw process flow chart for combed yarn with input and output of each process.	03
	(b) List different card clothing used in card? Discuss any one in detail.	04
	(c) Explain construction and working of multi mixer machine with a labeled figure.	07
Q.2	(a) Discuss the objective of Ginning process.	03
	(b) What is the role of grinding and stripping in carding?	04
	(c) What are the pre-ginning & post-ginning operations?	07
OR		
	(c) Discuss the modern developments in blow room with suitable figures.	07
Q.3	(a) Draw sketches for the different types of grid bars.	03
	(b) Enlist the technological developments in carding.	04
	(c) What are the common problems encountered in the blow room process, and how can these be mitigated to ensure efficient yarn production?	07
OR		
Q.3	(a) Write the formula to calculate cleaning efficiency of blow room.	03
	(b) Discuss on processing of manmade fibre at blow room	04
	(c) Explain principle working of Autoleveller in carding.	07
Q.4	(a) Mention the objectives of Blow room	03
	(b) How does sliver formation occur in carding?	04
	(c) With neat sketch draw passage of material through carding machine and explain the process.	07
OR		
Q.4	(a) Discuss importance of card setting.	03
	(b) What is the importance of fine cleaning machines?	04
	(c) What are the different zones within a carding machine, and what functions do they perform?	07
Q.5	(a) How do neps form in carded slivers?	03
	(b) Calculate production of carding machine in kg/shift, if hank of sliver delivered is 0.14, Doffer rpm is 90. Efficiency of carding is 87%.	04
	(c) What is the function of the metal detector in blow room? With a suitable sketch explain the working of metal detector used in blow room.	07
OR		
Q.5	(a) What is a tandem card, and how does it work?	03
	(b) Discuss the advantages of the lap feed system and tuft feed system in card.	04
	(c) What are the common defects in card sliver formation, and what remedial measures can be taken to address these defects?	07
