

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER– III(NEW) EXAMINATION – WINTER 2022****Subject Code:3132902****Date:22-02-2023****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.
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) Explain construction and working of fine cleaning machine with a labeled 04
- (c) List different card clothing used in card? Discuss any one in detail. 07
- Q.2 (a) Discuss the objective of Ginning process. 03
- (b) With suitable sketches discuss the different types of grinding tools used for sharpening wire points 04
- (c) Explain the working of the knife roller ginning machine with a labeled figure. 07
- OR**
- (c) Discuss the modern developments in blow room with suitable figures. 07
- Q.3 (a) Write the formula to calculate cleaning efficiency of blow room. 03
- (b) What is the role of blending in spinning process, explain different types of blending. 04
- (c) Discuss the modern developments in blow room. 07
- OR**
- Q.3 (a) Draw sketches for the different types of grid bars. 03
- (b) Discuss on processing of manmade fibre at blow room 04
- (c) Explain principle working of open loop and close loop Autoleveller. 07
- Q.4 (a) Mention the objectives of Blow room 03
- (b) Discuss carding and stripping action. 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) Discuss the development took place at Licker-in region with suitable figure 04
- (c) Calculate production of carding machine in kg/shift, if hank of sliver delivered is 0.13, Doffer rpm is 70. Efficiency of carding is 92%. 07
- Q.5 (a) Write short note on quality of laps. 03
- (b) Explain construction and working of step cleaner with a labeled figure. 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) Draw a flow chart showing passage of material in the tandem card. 03
- (b) Discuss the advantages of the lap feed system and tuft feed system in card. 04
- (c) Explain construction and working of mixing machine used in the modern blow room line with a labeled figure. 07