

[Total No. of Questions - 9] [Total No. of Printed Pages - 3]
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B. Tech 3rd Semester Examination

Yarn Manufacture-I (O.S.)

TE-3003

Time : 3 Hours

Max. Marks : 100

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all, select one question from each sections A, B, C and D. Section E (Question-9) is compulsory.

SECTION - A

1. (a) State different cotton picking methods and different sources of contamination during cotton picking and ginning. (10)
- (b) What are pre ginning treatments? How are these performed? (10)
2. (a) With the help of sketch drawing, explain working principal of Knife Roller Gin. (15)
- (b) State Post Ginning Process. (5)

SECTION - B

3. (a) Draw the line diagram of a modern Blow Room Line for cotton having 4% trash. (5)
- (b) Explain the working principle of any one latest beater used in modern Blow Room Line. (15)

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4. (a) State objects of mixing. (5)
- (b) What do you understand by Fibre Quality Index? How is it achieved? (15)

SECTION - C

5. (a) State the latest developments in carding machines. Also mention 3 trade names of latest carding machines available in Indian market. (10)
- (b) Draw the line diagram of a carding machine used for short staple spinning system. Also write various setting and speeds of important parts of carding machine. (10)
6. (a) Explain coiling mechanism in a carding machine. What is over coiling and under coiling? (15)
- (b) Write advantage and disadvantage of lap and chute feed system. (5)

SECTION - D

7. Discuss the formation and control of drafting waves. (20)
8. (a) Explain the spring and pneumatic weighting systems at draw frame alongwith their advantages and disadvantages. (12)
- (b) Illustrate the construction of top and bottom rollers used on draw frame. (8)

SECTION - E

9. (a) Write approximate production values (Kg/hr) of Blow Room, Carding and Draw Frame for cotton spinning system.
- (b) State hardness of the top roller cots in drafting system for soft, medium and hard cots.

- (c) State principle of cleaning of Air stream cleaner.
- (d) Define coarse cleaning and fine cleaning at blow room.
- (e) What do you understand by Tandom card?
- (f) State semi-rigid clothing in reference of card clothing.
- (g) Draw sketch to illustrate over all height, height of base and depth of tooth in reference to metallic card clothing.
- (h) Enlist latest developments in ginning machines.
- (i) Differentiate between mechanical draft and actual draft.
- (j) State composition of hooks in card sliver. **(2×10=20)**