

[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2125)

15298

B. Tech 7th Semester Examination
Mechanics of Textile Process (NS)
TE-413

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 total selecting one question from each of the section A, B, C and D and all subparts of the question in section E.

SECTION - A

1. Discuss the object of carding machine and explain Kaufmans theory of carding action. (20)
2. Explain hooks and how it generate in spinning. Discuss with diagram. (20)

SECTION - B

3. Discuss the objects of combing and explain combing process. (20)
4. Define fractionating efficiency and its role in combing process. (20)

SECTION - C

5. Why roving frame is needed in the ring spinning system? (20)
6. Write the factors which are responsible for yarn tension in ring spinning. (20)

SECTION - D

7. What are criterion for uniform package build? Derive the condition for uniform cheese winding. (20)

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2

15298

8. Why the bumping occurs while weaving of fabric in high pick density and how it can be minimized? (20)

SECTION - E

9. (i) The end breakage is maximum within a chase length when
(a) The ring rail is at bottom most position (b) The ring rail is moving up (c) The yarn tension maximum (d) The ring rail is moving down. (3)
- (ii) Sizing of warp yarn
(a) Adds value of warp yarn (b) Improves weavability (c) Increase the strength of finished fabrics (d) Increases breaking extension of the sized yarn. (3)
- (iii) Wind is defined as
(a) Number of coils per traverse (b) Number of coils in double traverse (c) Number of grooves in the drum (d) Winding speed in meter per min. (2)
- (iv) The angle of the conical portion of the drum in sectional warping is around
(a) 0° - 4° (b) 6° - 20° (c) 30° - 45° (d) 45° - 60° (2)
- (v) According to Lord and Mohammad eccentricity of the sley should be
(a) $E=L/R$ (b) $E= [R \times R]/L$ (c) $E= R/L$ (d) $E= R/[L \times L]$ (2)
- (vi) Retardation of shuttle
(a) Reduce the velocity of shuttle (b) Increase the velocity of shuttle (c) Not affected the shuttle velocity (d) None of them. (2)
- (vii) What is the minimum strength of the textile fiber?
(a) 10CN/Tex (b) 20CN/Tex (c) 3.5CN/Tex (d) 6CN/Tex (2)
- (viii) Maximum PPSI in the carding is at the
(a) Licker-in (b) Cylinder (c) Doffer (d) Flat (2)
- (ix) Performance of blow room can be judged by
(a) Cleaning efficiency (b) Waste % (c) Nep generation (d) All of them. (2)