

Roll No.

Total Pages : 04

BT-5/D-14

8581

FABRIC MANUFACTURING

TT-305

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. (a) Give a classification of different types of rapier loom and describe in brief weft insertion mechanism for each type along with suitable diagrams. 12
- (b) With the help of suitable diagram explain the weft transferring mechanism from one head to another head of a Dewas type rapier. 8
2. (a) Compare weft velocity of different types of looms with suitable explanation. 10

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- (b) Explain weft insertion mechanism in Nissan water-jet loom. 10

Unit II

3. (a) What are the factor affecting pneumatic weft propulsion ? 4
- (b) Derive the expression showing the amount of propulsion force on an element of weft. 10
- (c) What are the different technique of splicing and knotting of yarn ? 5
4. (a) A 25 Tex cotton warp containing 3600 ends has 9% size add on. The maximum drying capacity is 350 kg/hr. Concentration is 8%. Calculate the optimum sizing speed which ensured that the moisture regain of the sized yarn is 8. The moisture regains of the unsized warp is 8.5%. 10
- (b) Derive the equations to estimation of strain energy in the torsion bar in projectile weaving. 10

Unit III

5. (a) What do you understand by positive continuous take up mechanism ? 6
- (b) Explain above mechanism with the help of a suitable practical example. 10
- (c) What are the advantages of quick style change system ? 4
6. (a) With the help of a suitable diagram explain working mechanism of an electronic jacquard. 10
- (b) What are the requirements of selvages ? Explain the mechanism of producing lenoselvage. 10

Unit IV

7. (a) Discuss the method of manufacturing fibrous web by the Rando-Feeder and the Rando-webber machine of Curlator Corp., USA. 10
- (b) Describe the method of manufacturing nonwoven fabrics by stitch bonding technique with binding thread system on a Maliwat machine. 10

8. (a) Discuss the method of manufacturing fibrous web by direct polymer-to-web systems of Du Pont. 10
- (b) Discuss the basic mechanism of binding nonwoven fabrics in needle punching machine. 10

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