



**B.TECH DEGREE EXAMINATIONS: NOV /DEC 2024**

(Regulation 2018)

Fourth Semester

**TEXTILE TECHNOLOGY**

U18TXI4202: Fabric Manufacture- II

**COURSE OUTCOMES**

- CO1: Discuss the concept of shuttle less loom and its evaluation.  
CO2: Discuss the concept and mechanism of shuttleless weaving machine.  
CO3: Discover the nonwoven technology.  
CO4: Describe the various nonwoven web laying and web bonding systems.

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 2 = 20 Marks)**

**(Answer not more than 40 words)**

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|--|-----|-------------------|
| 1. Classify shuttleless loom.  | CO1 | [K <sub>3</sub> ] |
| 2. Find out the weft insertion rate of shuttleless loom having a speed of 500 PPM and reed width is 3.2 meters with efficiency of 90%. | CO2 | [K <sub>3</sub> ] |
| 3. Differentiate the tip transfer and loop transfer principles in rapier loom.   | CO1 | [K <sub>3</sub> ] |
| 4. Give the list of nozzles used in Air jet loom.  | CO2 | [K <sub>2</sub> ] |
| 5. How to differ the multiphase loom with single phase loom?   | CO1 | [K <sub>2</sub> ] |
| 6. Define Nonwoven.  | CO3 | [K <sub>2</sub> ] |
| 7. Enlist the fibres used in nonwoven applications.  | CO3 | [K <sub>2</sub> ] |
| 8. What is web forming and web bonding technique?  | CO4 | [K <sub>2</sub> ] |
| 9. Compare needle punching and spun lace technique.  | CO4 | [K <sub>3</sub> ] |
| 10. Highlight IR bonding technique.  | CO4 | [K <sub>3</sub> ] |

**Answer any FIVE Questions:-**

**PART B (5 x 16 = 80 Marks)**

**(Answer not more than 400 words)**

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|---|----|-----|-------------------|
| 11. a) Compare Shuttle and Shuttleless loom.                            | 10 | CO1 | [K <sub>3</sub> ] |
| b) Highlight the tuck-in selvedge formation.                            | 6  | CO1 | [K <sub>3</sub> ] |
| 12. Explain the weft insertion cycle of the projectile weaving machine. |    | CO2 | [K <sub>3</sub> ] |

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|-----|----|--|----|-----|-------------------|
| 13. | a) | Explain the operational principle of Air jet weaving machine with neat sketch.       | 10 | CO2 | [K <sub>3</sub> ] |
|     | b) | Highlight the multiphase weaving machines.   | 6  | CO2 | [K <sub>3</sub> ] |
| 14. |    | Explain the working principle of parallel laid web formation with neat sketch.       |    | CO3 | [K <sub>3</sub> ] |
| 15. |    | Discuss the working principle of mechanical needle bonding machine with neat sketch. |    | CO4 | [K <sub>3</sub> ] |
| 16. |    | Explain any one wet laid web forming machine with neat sketch.                       |    | CO4 | [K <sub>3</sub> ] |

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