



B.TECH DEGREE EXAMINATIONS: APRIL / MAY 2024

(Regulation 2018)

Fourth Semester

FASHION TECHNOLOGY

U18FTT4001: Fabric Formation Technology

COURSE OUTCOMES

- CO1: Acquaint with the objectives and acquire knowledge of working principles of machinery used for preparation of yarn for weaving.
- CO2: Describe the working principle of beam preparatory machines for weaving.
- CO3: Acquire knowledge in the selection of sizing ingredients for different fibres.
- CO4: Understand the objectives and working principles of shuttle and shuttleless looms.
- CO5: Develop knowledge in the selection of suitable preparatory processes for weaving.
- CO6: Acquire knowledge on nonwoven manufacturing techniques and its applications.

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. Name the objectionable yarn faults found in ring yarn. | CO1 | [K ₁] |
| 2. Illustrate the weaving preparatory process in a flow chart. | CO1 | [K ₃] |
| 3. Compare beam warping with sectional warping. | CO2 | [K ₄] |
| 4. Analyze the process parameters which influence the size add-on %. | CO2 | [K ₃] |
| 5. Classify the types of looms. | CO3 | [K ₂] |
| 6. Compare dobbie shedding and jacquard shedding. | CO3 | [K ₄] |
| 7. What factors contribute to the increased productivity of shuttle-less looms compared to conventional shuttle looms? | CO4 | [K ₃] |
| 8. Analyze the importance of Loom Data System (LDS). | CO4 | [K ₄] |
| 9. What is SMS fabric? | CO5 | [K ₁] |
| 10. What is hydroentangling? | CO5 | [K ₂] |

Answer any FIVE Questions:-
PART B (5 x 16 = 80 Marks)
(Answer not more than 400 words)

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|-----|----|--|----|-----|-------------------|
| 11. | a) | Explain the importance of yarn clearers in cone winding and its types. | 8 | CO1 | [K ₅] |
| | b) | Critically analyze the yarn quality requirements for weaving. | 8 | CO1 | [K ₄] |
| 12. | a) | Demonstrate the working of a warping machine with a neat sketch. | 8 | CO2 | [K ₂] |
| | b) | Analyze the importance of sizing and explain its types. | 8 | CO2 | [K ₃] |
| 13. | a) | Demonstrate the passage of material through a loom with neat diagram. | 8 | CO3 | [K ₂] |
| | b) | Elaborate on the primary secondary and auxiliary mechanisms of a loom. | 8 | CO3 | [K ₂] |
| 14. | a) | Describe the weft insertion mechanism of air jet loom. | 8 | CO4 | [K ₂] |
| | b) | Analyze the techno-economic benefits of adopting shuttle-less weaving machines in a textile manufacturing setup. | 8 | CO4 | [K ₄] |
| 15. | | Discuss in detail the application of nonwoven in various fields of engineering. | 16 | CO6 | [K ₆] |
| 16. | a) | Discuss the importance of computerized fabric inspection. | 8 | CO5 | [K ₂] |
| | b) | Analyze the process and quality control measures in weaving. | 8 | CO5 | [K ₄] |
