

**A 1399**

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2006.

Fifth Semester

Textile Technology

TT 336 — TECHNOLOGY OF FABRIC MANUFACTURE — I

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What factors contribute for the existence of different types of looms?
2. Why there is a need for card cradle?
3. In doobby pegging, why is the direction of cylinder rotation taken into account?
4. Why there is existence of different kinds of shed?
5. Keeping front centre as "O" degree, give the timings of primary and secondary motions.
6. If shuttle front groove is not there, what problem will arise?
7. Why not five wheel take-up be called as negative take-up?
8. What is the specific drawback of side weft fork mechanism?
9. Why the warp width in the weaver's beam to be more than the reed width?
10. What do you mean by Fabric engineering?

PART B — (5 × 16 = 80 marks)

11. (i) List out all the factors, which influence non-automatic loom efficiency. (8)
- (ii) State the various defects and causes pertaining to grey-fabric woven in a non-automatic shuttle loom. (8)

12. (a) (i) With a neat diagram explain the concept of  $e$  - shedding. (6)  
(ii) List out the merits and demerits of positive and negative shedding. (6)  
(iii) Give the classification of dobbies and Jacquards. (4)

Or

- (b) (i) With a neat sketch explain the working of double lift single cylinder jacquard. (12)  
(ii) With a graphical diagram, illustrate the heald movement pattern for a plain weave. (4)
13. (a) (i) Explain the functioning of a spring easing reversing mechanism. (6)  
(ii) Discuss the concept of electronic jacquard functioning. (10)

Or

- (b) With a neat diagram, explain the working of Shinley positive dobbie.
14. (a) Explain the working and discuss the adjustments with respect to cone over picking mechanism.

Or

- (b) (i) Discuss the importance of sley eccentricity. (6)  
(ii) Explain the facts for speed limitations in shuttle loom. (6)  
(iii) Explain the purpose of keeping shed crossing at top centre. (4)
15. (a) (i) With neat sketches discuss the suitability of various heald wires and temples used in non-automatic loom. (10)  
(ii) Compare and contrast loose reed and fast reed for their performance. (6)

Or

- (b) (i) Derive take-up constant for seven wheel take-up motion. (8)  
(ii) Explain the problems associated with negative let-off motion. (4)  
(iii) Explain the reason for "Bumping". (4)