Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Textile) (2011 Onwards) (Sem.–4)

FABRIC MANUFACTURE–I

Subject Code : BTTE-403

Paper ID : [A2752]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Answer briefly :

a. Mention the limitations of Bottom close shedding.

b. Mention the different types of additive tensioners.

c. Mention the objectives of Sizing.

d. What are the primary and auxiliary motions of a loom?

e. Why tensioners are used in winding?

f. What are the reasons of tension variation of yarn during winding?

g. Mention the points which warping should not do.

h. What are the different types of conventional picking systems? Mention.

i. What are the advantages of higher sley eccentricity ratio?

j. What do you understand by 'Objectionable fault' of yarn?

SECTION-B

2. Three yarns- 28^s, 30^s &32^s are twisted together. The resultant yarn weighs 137 lbs. Find the resultant count and weight of each yarn.

3. Mention the working principle of T.F.O. along with its advantages.

4. Mention the different types of anti patterning devices.

5. Establish the relationship between ppm, velocity of shuttle, degrees of crank rotation, length of shuttle and reed width & also establish the equation of power for picking.

6. Show mathematically that sley reciprocation does not follow the SHM.

SECTION-C

7. a) Explain the principles of different types of tensioners along with advantages and disadvantages. (6)

   b) What is 'Acceleration' in winding? Explain it mathematically. (4)

8. The wt. of sized yarn on a beam was found to be 825 lbs. The beam contains 10560yds of warp whose count before sizing was 50^s cotton. If the no. of ends in the warp is 3000. Calculate : (10)

   a. Weight of size on yarn

   b. percentage of size put on yarn

   c. the count of sized yarn.

9. a. Describe the working principle of a Under picking system. (5)

   b. Write short notes : (5)

      i. positive tappet mechanism

      ii. bending factor