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

M.Code : 71646

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 scopes of Dobby shedding.

b. Why Warp yarn winding is so important?

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 purpose of warping.

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

i. Why higher sley eccentricity ratio is not preferred always?

j. What is '*Bumping*' ?

SECTION-B

2. Draw the coil path of a cylindrical package with Traverse Ratio 2.5, length of traverse 10cm and circumference of package 12cm.

3. Mention the working principle of T.F.O. along with it's advantages.

4. Mention the testing/ yarn conditioning parameters of USTER Classimat-III.

5. Show that the winding speed remains constant in case of a drum driven cheese.

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

SECTION-C

7. a. A mill manufactures in large quantity warper beams containing 150 kg. and 400 ends of 400 tex yarn. On an average there are 40 breaks/beam, each taking 1.2 min. to repair and doffing time per beam is 6 min. The warping speed is 550 meters/ min. If a magazine creel is in use, determine : 6

   i. The running efficiency and

   ii. The average production in kg. per hour.

   b. Three yarns- 28^s,30^s &32^s are twisted together. The resultant yarn weighs l37 lbs. Find the resultant count and weight of each yarn. 4

8. a. Describe a parallel picking mechanism with a neat sketch. 6

   b. 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. 4

9. a. Describe the working principle of a Five Cylinder sizing machine. 5

   b. Write a brief about one non-conventional sizing techniques. 5

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.