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Roll No.	Total No. of Pages : 02
Total No. of Questions : 09	
B.Tech.(Textile Engg.) (2011 Onwards)	(Sem.–4)
FABRIC MANUFACTURE	-1
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 limitations of tappet 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 'Weaving Resistance'?



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# **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 its advantages.
- 4. Mention the testing and 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**

- A mill manufactures in large quantity warper beams containing 300 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
  - i. The running efficiency
  - ii. The average production in kg per hour.
  - b. Three yarns- 28<sup>s</sup>, 30<sup>s</sup> & 32<sup>s</sup> are twisted together. The resultant yarn weighs137 lbs. Find the resultant count and weight of each yarn. 6+4
- 8. a. Describe a parallel picking mechanism with a neat sketch.
  - 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 two 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.

6