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

Total No. of Questions : 09

B.Tech.(Textile) (2011 Onwards) (Sem.–6)

KNITTING TECHNOLOGY

Subject Code : BTTE-603

Paper ID : [A2762]

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. Write briefly :

a) What is the difference between interlooping and interlacing?

b) What are the different parts of a latch needle?

c) Explain how single jersey fabric curls at the edges.

d) Why rib knitted structures are more stretchable as compared to a plain knit fabric produced using same yarn?

e) Explain how sinker affects loop formation in single jersey knitting?

f) Rib machines of same gauge require finer yarns compared to a single jersey machine. Explain.

g) Give knitting notation of half and full cardigan structures.

h) Each interlock course is composed of two rib courses – Explain.

i) Which type of knitting machine is employed for production of spacer fabric?

j) What is run-in per rack in warp knitting? How it is related to stitch length?

SECTION-B

2. What are different components of a bearded needle? Explain knitting action of bearded needle.

3. Explain principle of purl knitting. Does laddering occur in purl knit structures? Explain.

4. Explain in brief, cam system and working principle of hand operated flat knitting machine.

5. Discuss principle of a) multiple cam tracks and b) needles with different butt length for producing different structures.

6. Give example of two single jersey jacquard structures. How these can be produced on machine?

SECTION-C

7. Discuss the factors affecting loop length. How loop length can be controlled? Show how theoretical loop length changes as machine gauge is altered by 20% keeping other parameters constant. [2+5+3]

8. a) Find out the weight per square yard and GSM of a single jersey fabric made of 20s cotton if the analysis of the same shows 40 courses per inch, 30 wales per inch and 15 inch length for 100 loops. [5]

   b) If stitch density of a wet relaxed knitted fabric is 86.4. Estimate wales/inch and coarse/inch of the fabric. Given, loop shape factor is 1.29. [5]

9. a) Discuss loop forming cycle of Raschel knitting machine using latch needle. [5]

   b) With a line sketch explain how shogging motion of guide bar is achieved using a pattern wheel. [5]