

Reg. No. :

**R 3637**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Fifth Semester

Textile Technology

TT 1301 — KNITTING TECHNOLOGY

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the basic elements of weft knitting.
2. Differentiate between open loop and closed loop.
3. Give the symbolic notations for the basic stitches of Weft Knitting.
4. Differentiate between the rotating cylinder and rotating cam type of circular knitting machines.
5. State the functional requirements for interlock Knitting.
6. Name the functional elements of flat Knitting.
7. Differentiate between the Tricot and Raschel warp knitting machines.
8. What do you mean by the terms swinging and shagging?
9. Define the following terms with respect to the warp knitting.  
(a) Rack (b) Run-in
10. List out the different dimensional characteristics of knitted fabrics.

PART B — (5 × 16 = 80 marks)

11. (a) Give a detailed account on yarn selection and yarn quality requirements for weft knitting.

Or

- (b) (i) Compare the characteristics of woven and knitted fabrics.  
(ii) Give a detailed classification of weft and warp knitting machines.

12. (a) Compare in detail the characteristics of the four basic structures of weft knitting with respect to their appearance, weight, strength, extension, thickness, dimensional stability etc.

Or

- (b) Give a detailed analysis of the various faults occurred with tubular knitted fabrics by stating their causes and remedies.

13. (a) With suitable diagrams, discuss the various needle selection principles used with the weft knitting machines for the jacquard knitting.

Or

- (b) With neat sketches, account the various fabric designs produced with the flat knitting machines.

14. (a) With neat sketches, explain the principle of loop formation per knitting cycle in a Tricot warp knitting machine.

Or

- (b) With suitable lapping diagrams, discuss the various guide bar lapping principles used with two bar warp knitting machines.

15. (a) Give a detailed account on the various quality control tests to be carried out for the united fabrics.

Or

- (b) Calculate the fabric production in (i) Yards per hour and (ii) Pounds per hour for the following circular knitting machine.

CPI - 20                      Machine speed - 25 rpm                      Yarn count - 20 Ne

WPI - 22                      Stitch length - 0.12 inch                      Feedern - 10

Gauge - 20                      Machine diameter - 18 inch                      Efficiency - 90%.

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Fifth Semester

Textile Technology

TT 1302 — PROCESS AND QUALITY CONTROL IN SPINNING

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. How are the norms developed for the 'Process output quality at various stage of spinning?
2. Mention the process route to produce combed cotton and polyester blended yarn.
3. What is the norm for fibre rupture and neps change while processing cotton in a good blow room line?
4. What are the different measures of blending irregularity of a strand?
5. The cleaning efficiency of blow room line is 58% and that of card is 85%. Calculate the trash present in the card sliver, if the trash present in the raw cotton is 5.0%.
6. Write the equation to estimate combing efficiency per 1% noil extraction.
7. What are the sensitivity levels normally used for measuring the imperfections of ring yarn?
8. How is periodic fault present in a textile strand measured?
9. What are the main factors affecting the production efficiency of comber preparatory machine?
10. What are the measures of labour productivity in a spinning mill?