



Name :

Roll No. :

Invigilator's Signature :

CS/B.Tech/APM/NEW/SEM-6/APM-604A/2013

2013

KNITTING & KNITWEAR TECHNOLOGY

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) The two sides of which weft knitted fabric are not identical ?
- a) Plain single jersey b) Plain rib
- c) Plain interlock d) None of these.
- ii) Faults appear on knitted fabrics due to
- a) Yarn quality
- b) Problems on knitting machines
- c) Problems during dyeing and finishing of fabrics
- d) all of these.



iii) To produce any design on a weft knitting machine, use of which type of cam is compulsory ?

- a) Knit cam
- b) Tuck cam
- c) Miss cam
- d) None of these.

iv) Which needle is termed as self-acting needle ?

- a) Bearded needle
- b) Latch needle
- c) Compound needle
- d) None of these.

v) Flat knitting machines are generally used to produce

- a) Single jersey structure
- b) Rib structure
- c) Interlock structure
- d) None of these.



vi) The extensibility of which weft knitted fabric is maximum ?

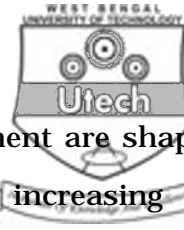
- a) Single jersey
- b) Rib
- c) Interlock
- d) Fleece.

vii) A knitting stitch that produces a herring bone effect with a rib back is

- a) Rack stitch
- b) Raschel lace
- c) Raschel
- d) Velour.

viii) A knit fabric stitch that produces a design that looks like a heavy cord – common in sweaters and hosiery is

- a) Canvas
- b) Canton flannel
- c) Albatross
- d) Cable stitch.



ix) The process whereby portions of a garment are shaped at the selvages by progressively increasing or decreasing the number of loops in the width of the fabric is

- a) single jersey
- b) fully cut
- c) fully fashioned
- d) rib.

x) Which of the following is not the basic technique of integral knitting ?

- a) Course shaping
- b) Tubular knitting
- c) Open buck
- d) Running-on.

GROUP - B

(Short Answer Type Questions)

Answer any *three* of the following. $3 \times 5 = 15$

2. "Two yarn feeders are required to produce one course of a basic interlock structure." Explain.
3. Multi-track circular weft knitting machines are more versatile than single-track ones in terms of design. Explain.



4. What is spirality and how does it appear in knitted fabrics ?
How this can be reduced ?
5. Write short notes on any *two* of the following :
- a) Cardigan half
 - b) Cardigan full
 - c) Cheviot
 - d) Interlock.
6. What are the common sewing defects and their remedies of sewing sweaters ?
7. Elaborate on body form steam press and steam press.

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

8. a) With the help of suitable diagram, explain the different stages of loop formation cycle of a weft knitting machine using latch needle. 10
- b) What are the different kinds of stitches in weft knitting and how are they formed ? 5



9. a) Calculate the production of a single jersey weft knitting machine in kilogram per shift of 8 hours from the following data : 5

Diameter of machine – 30 inches

Machine gauge – 24

No. of feeders – 96

Machine speed – 30 rpm

Stitch length – 2.5 mm

Yarn used – 20s combed yarn

Machine efficiency – 85%

- b) Mention the important quality parameters of yarns, used for knitting and elaborate as to how these parameters affect the quality of knitted fabrics and productivity of a knitting machine. 10
10. a) What is GSM and which parameters of weft knitted fabric are required to calculate the GSM ? Calculate the GSM of a weft knitted fabric considering the relevant data of your choice. 5
- b) Mention 5 each of frequently occurred fabric defects which appear on a weft knitted fabric due to yarn faults and problems of knitting machines. Discuss on how they appear and their remedial measures. 3 + 7



11. Elaborate on the production technique of fully fashioned sweaters and describe knitting of slipovers and cardigan, using illustrations. 9 + 3 + 3
12. What are the types of knitting machines ? Describe the production technique for knitting sweaters. 7 + 8
13. What are the operating difficulties while cutting and sewing sweaters and mention their remedies. 9 + 6
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