



17459

11718

3 Hours / 100 Marks

Seat No.

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- Instructions :** (1) *All questions are compulsory.*
(2) *Answer each next main question on a new page.*
(3) *Illustrate your answers with neat sketches wherever necessary.*
(4) *Figures to the right indicate full marks.*
(5) *Assume suitable data, if necessary.*
(6) *Use of Non-Programmable Electronic Pocket Calculator is permissible.*
(7) *Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.*
(8) *Use of steam tables, logarithmic, Mollier's chart is permitted.*

Marks

1. Attempt any ten :

20

- Define warp knitting.
- Define course.
- Define wale.
- List down different zones in circular weft knitting machine.
- State function of sinker.
- Define :
 - Gange of machine
 - Feeder density.
- Draw loop diagram of 1×2 rib structure.
- Draw the loop structure of tuck stitch.
- Define stitch length.
- State formula for G.S.M.
- Define tightness factor.
- Draw loop diagram of tricot stitch and give chain notations for the same.
- Define swinging and shogging motions of guide bars.
- State the function of presser.
- Describe the concept of block pattern.

2. Attempt any four :

16

- Compare properties of knit fabric with woven fabric.
- Describe various creels used on weft -knitting machine. State their relative merits and demerits.
- Draw diagram of 2×2 Rib. Draw loop diagram and graphical representation of the same.

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- d) Describe the concept of design, needle order and cam order with the help of an example.
- e) Describe the concept of Relanit technique and state advantages of the same.
- f) What is spinality of knitted fabric ? How it is measured ?

3. Attempt any four :

16

- a) Classify the weft knitting machines into various categories.
- b) Describe various needles used on knitting machines. Compare their relative merits and demerits.
- c) Draw design of interlock. Draw loop diagram and graphical representation of the same.
- d) Draw loop diagrams of La-coste and cross tuck. Give needle order and cam order of the same.
- e) Describe the concept of stripper with the help of an example.
- f) Describe following knitted fabric faults and causes for the same (**any two**).
 - i) Holes or cracks
 - ii) Drop stitches
 - iii) Barre Horizontal stripes.

4. Attempt any four :

16

- a) Describe knitting cycle on single jersey machine with the help of neat diagrams.
- b) Draw diagram of purl structure. Give loop diagram and graphical representation of the same.
- c) Give loop diagrams of Milano rib and Evermonte.
- d) Describe the concept of plush fabric. How it is produced ?
- e) A 24 feeder single jersey machine is working with 30 rev/min speed. Calculate the products of machine in yard/hr and lb/hr from following data
 - Stitch length – 0.15”
 - No. of needles in machine – 756
 - Efficiency = 90%
 - Count of yarn knitted = 20^s Ne
 - CPI = 24
- f) Give detailed classification of flat knitting machines.

5. Attempt any two :

16

- a)
 - i) Compare properties of rib with interlock structure.
 - ii) Draw loop diagrams of Punto-di-roma and ottoman rib.
- b) Compare warp knitting with weft-knitting.
- c) Describe passage of yarn through tricot knitting machine with the help of a neat labelled diagram.

6. Attempt any two :

16

- a)
 - i) Draw loop diagram of close loop pillar stitch and tricot lap. Give chain link notation of the same.
 - ii)
 - a) List down various steps used for quality control of knits.
 - b) Describe the effect of stitch length on fabric properties.
- b)
 - a) Describe in detail objectives and requirements of spreading for knit garment. List down various methods of the same.
 - b) Describe objectives and requirements of cutting. List down various equipments used for cutting in Garment industry.
- c) Describe in detail planning, drawing and reproduction of marker for the knit garment.