22463

21819

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions – (1) All Questions are *Compulsory.*

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

(5) Preferable write the answesr in sequential order.

(6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Answer any FIVE of the following: **10**

a) State the various reasons for growth of knitting industry.

b) Define the terms:

(i) Course

(ii) Wale

c) Draw loop diagram of technical face and technical back side of single jersey structure.

d) State the principles stitches in weft knitting fabrics and their effect on fabric properties.

e) State the characteristics of single jersey fabric.

f) Enlist various elements of the tricot warp knitting machine.

g) Define stitch length. State importance of stitch length in knitting.

Marks

2. Answer any THREE of the following: **12**

a) Describe following terms in knitting.

(i) Weft Knitting

(ii) Course Length

(iii) Open Loop and Close Loop.

b) List down various elements of single jersey and explain knitting cycle with help of neat diagrams.

c) Draw the diagram of self – acting needle and label its parts. Why it is called so? Why spring bearded needle is used for fine structure ?

d) Draw diagram of 1x1 RIB structure. State characteristics of the RIB structure.

3. Answer any THREE of the following: **12**

a) Compare woven and knit fabrics with respect to following points.

(i) Properties

(ii) Production rates

(iii) Raw material

(iv) End uses

b) Explain the tricks, gaiting cam arrangement needle arrangement of Interlock machine.

c) Give chain link notations of both guide bars of following warp knit structure.

(i) Sharkskin

(ii) Locknit

d) Draw diagram of interlock structure. Draw graphical representation and Loop diagram for the Interlock. State characteristics of Interlock structure.

Marks

4. Answer any THREE of the following: **12**

a) Explain passage of yarn on flat knitting machine with the help of neat diagram.

b) Describe method of determining stitch length of a weft knitting structure.

Explain how stitch length affects various properties of knitted fabric.

c) Differentiate between weft knitting with warp knitting with respect to following points.

(i) Machine specification.

(ii) Speed of machine.

(iii) Structure of fabric.

(iv) Production rates

(v) Properties of fabric

(vi) Input material

(vii) Type of yarn used

(viii) Cost of machine

d) Draw diagram of purl structure. Give graphical representation and loop diagram of the same.

e) Enlist various of following defects of weft knit structure.

(i) Drop stitches

(ii) Distorted stitches

(iii) Vertical lines

(iv) Horizontal line.

Marks

5. Answer any TWO of the following: **12**

a) Explain knitting cycle on RIB machine with the help of neat diagram.

b) Describe the knitting cycle on TRICOT knitting machine with the help of neat diagrams.

c) A circular weft knitting machine having 20 feeders running at a speed of 25 rpm , is knitting fabric with a stitch length of 0.15 inch with 756 needles in the machine. The efficiency of machine is 84% and count of yarn knitted is 20's. The fabric is knitted with 24 courses per inch. Calculate production in yards and pounds per hour.

6. Answer any TWO of the following: **12**

a) Explain in details various methods of ornamenting plain single jersey fabric.

b) Explain knitting cycle of RASCHEL warp knitting machine with the help of neat diagrams.

c) If the sample analysis shows that the single jersey structure has 40 courses per inch. 28 wales per inch, length of yarn for 50 stitches is 10.25 inches and the count of yarn is 20's cotton, find the weight in 02s per square yard of this fabric.
