17464

21314

3 Hours / 100 Marks Seat No. | | | | | | | | |

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.

Marks

1. Attempt any <u>TEN</u> of the following: **20**

a) Define knitting.

b) Define 'Course' and 'Wale'.

c) Draw diagram of 'Latch needle' and lable the parts.

d) State the function of sinker. Draw diagram of the same.

e) Describe the concept of face loop and reverse loop in weft-knitting with the help of a diagram.

f) Draw diagramatic representation of half cardigan and full cardigan.

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g) Draw diagramatic representation of 'Eightlock' structure.

h) What is tuck-stitch ? How it is produced ? Represent tuck stitch in diagram.

i) Describe tightness factor and give an expression for the same.

j) What is stitch length ? How it can be calculated ? What is its significance ?

k) A single jersey machine with 20 feeders is knitting at the speed of 24 rpm. Calculate the production in inches/minute, if course/inch are 24.

l) Discuss 'Underlap' and 'Overlap' in warp knitting.

m) What is 'Swinging' and 'Shogging' motion is warp knitting.

n) State the causes of drop stitches on single jersey machine.

o) State various basic properties of yarn you would like to consider for maintaining quality of knitted fabric.

2. Attempt any <u>FOUR</u> of the following: **16**

a) State reasons for growth of knitting industry. (any four)

b) Draw diagrams of different types of needles and label their parts. State the machines on which these needles are used.

c) What is the function of positive feeder. State its usefulness with help of diagram.

d) Describe knitting cycle of single jersey machine with the help of a knit diagram.

e) Draw technical face side of single jersey structure. Draw graphical and diagramatic representation of the same.

f) Draw structure of 1 × 1 Rib. Also draw graphical and diagramatic representation of the same.

Marks

3. Attempt any <u>FOUR</u> of the following: **16**

a) State characteristics of rib fabric. Draw diagramatic representation of 2 × 2 rib.

b) Draw diagram of miss stitch. Draw graphical and diagramatic representation of the same. How this stitch is produced ? What is its effect on fabric property.

c) A circular weft knitting machine having 20 feeders, running at 25 rpm is knitting with stitch length of 0.15 inch, with 756 needles in the machine. The efficiency of the machine is 84% and the count of yarn knitted is 18^s. The fabric is knitted with 24 courses per inch. Calculate the production in yards and pounds per hour.

d) Compare 'Warp Knitting' with 'Weft Knitting'.

e) Draw diagram of tricot knitting machine and label the parts.

f) List down various knitting elements of single bed flat knittings machine and explain their function.

4. Attempt any <u>FOUR</u> of the following: **16**

a) Draw Cam arrangement on Interlock machine draw diagramatic representation of the same.

b) Draw diagramatic representation of following structures.

i) Ponte-de-Roma

ii) Texi Pique.

c) A single jersey fabric has 30 courses per inch, 24 wales per inch. The length of 50 stitches is 8.75 inches and count of yarn is 15^s Ne. Find the weight in grams per square yard.

d) Classify warp knitting machines in different catagories.

Marks

e) How patterning is done on warp knitting machine ? Draw diagrams of different types of chain links. Draw diagram and give lapping rotation for

i) closed loop Pillar stitch.

ii) closed loop Atlas lap.

f) Classify flat knitting machines in different catagories. State the difference between circular knitting and flat knitting with respect to

i) Gauge of machine.

ii) Yarns used.

iii) Type of fabric knitted and its application areas.

iv) Production.

5. Attempt any <u>TWO</u> of the following: **16**

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

b) Compare tricot and rachel machines.

c) Explain causes and remedies of different types of defects (any four).

Marks

6. Attempt any <u>FOUR</u> of the following: **16**

a) Draw diagram of Purl structure. Draw graphical and diagramatic representation of the same. State the characteristic of needle used to knit this structure and give reason for the same.

b) Draw diagramatic rotation of

i) La-coste

ii) Full cardigan

c) Draw diagram and lapping notation of (any two):

i) Full tricot

ii) Satin

iii) Queen's cord

d) Explain knitting cycle on single bed knitting machine with help of a diagram.

e) A single jersey fabric is made on a machine with 2040 needles with 28 courses per inch from 16^s cotton count and 80 stitches per foot. Calculate the weight per linear yard.

f) Give detailed classification of weft knitting machines.

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