# 17571

**15162**

**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 five** : **20**

a) What is characteristics of welt structure ? Construct a wadded welt structure. Draw design, draft, peg-plan and cross section of the same.

b) What are characteristics of Backed cloth ? Construct a warp backed cloth. Draw design and cross-section.

c) Give detailed classification of Double Cloth.

d) Elaborate the concept of centre warp stitching and centre weft-stitching in centre-stitched Double cloth.

e) List down various methods of disposing surplus extra threads in extra thread figuring.

f) Draw Russian cord structure. Describe the characteristics of this structure.

g) Elaborate the concept of production of warp pile structure produced with the aid of wire.

**2.** Attempt **any four** : **16**

a) Describe the special mechanisms required for Welt and Pique structures.

b) Construct a reversible warp backed cloth. Draw design and cross-section of the same.

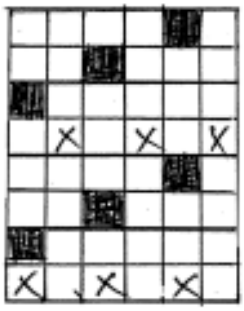
c) Construct an extra warp figure assuming your own motif.

d) List down various methods of constructing a leno design.

**P.T.O.**

**Marks**

e) Calculate the density of tuft (tufts/cm$^2$) of velveteen structure from following data design :



Ends/cm = 32

Ground picks/cm = 36.

f) Explain show colour patterns are obtained in weft knitting.

**3.** Attempt **any two** : **16**

a) State the concept and position of cutting ends and cord ends in bedford cord structures.

Construct a Wadded Bedford cord design. Draw design, draft, peg-plan and cross section of the same.

b) Compare extra warp figuring with extra weft figuring.

c) Construct design of a self stitched double cloth from following data :

i) Face weave – $\frac{4}{4}$ twill

ii) Back weave – $\frac{4}{4}$ twill

iii) Arrangement of warp and weft – one face, one back

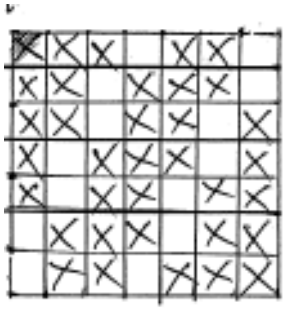
iv) Both types of stitchings to be used .

Draw cross section of this design.

**4.** Attempt **any two** : **16**

a) Construct a wadded pique structure. Draw design, draft and peg-plan of the same. Also compare welt with pique.

b) Construct a reversible double cloth from following data :



Face weave

Back weave

**Marks**

i) Arrangement of warp and weft – 1 face, 1 back

ii) Stitching used – raising of back end on face pick. Draw design and cross section of the same.

c) Draw design draft and peg plan of a counter leno produced by flat steel doup with an eye.

i) Arrangement of warp – one crossing end, 2 standard ends

ii) Picks/repeat – 16.

**5.** Attempt **any four** : **16**

a) Draw design, needle order and cam order for :

i) panto de roma

ii) texi pique.

b) Explain how patterning is done on single jersey multicam track machine with knit and miss stitches with 2 feeders.

c) Explain how twill effect is obtained on a 4 feeder multicam track single jersey machine.

d) Draw design, needle order and cam order for :

i) Ottoman rib

ii) Pin tuck.

e) Draw basic sheds formed in leno weaving with help of neat diagrams.

f) Explain with help of schematic diagram, how stitching takes place in centre stitched double cloth and interchanging double cloth.

**6.** Attempt **any four** : **16**

a) Construct design of centre warp stitched double cloth from following data :

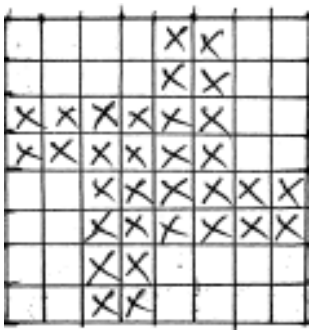
Face weave

Back weave

Two warp stitching ends are inserted in a repeat of centre stitched double cloth weave. Draw design and cross section.

**Marks**

b) Construct an interchanging double cloth design corresponding to following motif.



c) Explain how velveteens are produced. Draw design of a plain back velveteen with $\frac{1}{3}$ twill as pile weave. Draw cross section before and after cutting operation.

d) Elaborate with the help of a diagram how pile is produced in terry weaving.

e) Draw design, cam order and needle order for pique poplin.

f) Explain how vertical stripe pattern can be produced on single jersey multicam track machine.

———————