17225

15116

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

Marks

1. Attempt any TEN of the following: **20**

a) What are objects of pirn winding? Classify pirn winding?

b) Enlist various defects in pirn winding?

c) Define Tex count with formulae.

d) Enlist various secondary motion on plain power loom.

e) State the objects of picking.

f) What are objectives of take up motion and let off motion?

g) What is the objectives of shedding and list types of shedding.

h) Define metric count with formulae?

i) State the objective of weft stop motion?

j) State the function of heald and reed.

k) Enlist various fabric defects?

l) State the meaning and remedies for cracks in fabric.

m) What is role of temple in loom?

P.T.O.

Marks

2. Attempt any FOUR of the following: **16**

a) Describe the working of five wheel tube up mechanism with neat sketch.

b) State the various care to be taken during use and storage of healds and reed?

c) Describe causes and remedies for shuttle smash and reedy fabric?

d) Calculate weight of weft from following particulars:

Picks / inch = 58

weft count = 30^{J}

fabric length = 100 yards

weft crimp = 5%

fabric width = 56″

e) State causes and remedies for floats and bad salvedges?

f) Calculate length of polyester filament yarn in meters of package of 1 kg if the filament denier is 150.

3. Attempt any TWO of the following: **16**

a) Describe passage of material through pirn winding machine with neat sketch?

b) Describe passage of warp through plain power loom with neat sketch?

c) Explain construction and working of plain tappet shedding mechanism?

4. Attempt any TWO of the following: **16**

a) Describe construction and working of cone over pick mechanism with neat sketch?

b) What is weft stop motion? Explain any one weft stop motion?

c) Give causes and remedies for following defects:

(i) Missing end

(ii) Thick plane

(iii) Temple marks

(iv) Starting mark

Marks

5. Attempt any TWO of the following: **16**

a) (i) Calculate the count of three fold cotton yarn compound of 20^s, 15^s and 12^s singles. 4

(ii) What is the equivalent count of 10^s jute in denier? Conversion factor is 310. 2

(iii) If 240 yards of cotton weigh 40 grains, what is the count of the yarn? 2

b) Explain function, care during use and storage of:

(i) Stuttle

(ii) Picker

(iii) Buffer

(iv) Picking band

c) A loom is running at 270 rpm and producing a cloth with 46 picks per inch. If efficiency of loom is 90%. Calculate the production of loom per shift.

6. Attempt any FOUR of the following: **16**

a) Describe construction and working of beat up mechanism with neat sketch.

b) A loom beam containing 1080 yards of warp is required to be woven on a V - 45 model jet loom. If picks / inch in the cloth to be woven is 32. Calculate the time that will be required to complete weavers beam, if picks per minute is 720. Take 5% as waste and up-take of warp due to weaving. The efficiency of loom is 88%.

c) Draw labelled diagram of cone under pick mechanism?

d) Explain various features of fully automatic pirn winding machine.

e) Describe advantages and disadvantages of –ve and semi positive let off motion.

f) Calculate the length in meters of yarn on a cone of 40^s combed yarn weighing 3 kg.

g) Draw the schematic diagram of various temples.