17463

16117

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 TEN of the following: **20**

a) State the objects of Sizing. How these objects are achieved?

b) Enlist various sizing ingradients used in a size paste with an example.

c) Draw neat labelled sketch of conventional saw box?

d) State the importance of removal of condensed water from drying cylinder.

e) Why we need braking system on creels of sizing machine.

f) What is the function of drag roller?

g) Why PIV gears or differential cone drive is used on sizing machine?

h) What are lappers?

Marks

i) 14% size is required on the warp and concentration of size paste is 11%. Calculate the pick up of the size paste.

j) State main advantage of centre weft fork motion over side weft-fork.

k) List down different types of weft-feelers used on automatic loom. What is their function?

l) State two main reasons for shuttle changing looms not becoming so popular as pirn changing looms.

m) State the function of drawing in and denting process. State its importance.

n) What is knothing? When it is done?

o) List down different types of healds.

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

a) State the functions of following sizing ingredients.

(i) Starch

(ii) Softner

(iii) Antiseptic

(iv) Plasticisers

b) List down different types of creels used on sizing machine. Explain merits and demerits of any one with the help of a neat diagram.

c) Explain how stretch is measured on sizing machine.

d) What is the function of a weft-feeler? Explain working of mechanical feeler with the help of a neat diagram.

e) Explain main four points of difference between ordinary loom and autoloom.

f) What are causes of lappers? How they can be avoided? How do they affect efficiency of loom shed?

Marks

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

a) Draw diagram of pressure cooker used for cooking size paste and lable the parts.

b) What is wet splitting? State its importance.

c) What is leasing? State its importance. Draw a schematic diagram of the same.

d) Explain various factors affecting size pick up.

e) Explain selection, care and storage of healds.

f) It is required to make a crammed stripe in a 60^s stockport reed with following particulars.
60 ends of $2/80^s$ cotton 2 ends/dent - plain weave

60 ends of $2/40^s$ silk 5 ends/dent - sateen weave

Find the number of ends of each yarn (cotton and silk) and total number of ends if the reed width used is 35 inches.

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

a) (i) Explain size paste properties and their importance.

(ii) Draw diagram of a modern saw box and lable the parts and explain it?

b) Explain the working of a pirn changing mechanism with the help of a neat labled diagram.

c) State various precautions to be taken for preparing warp for auto weaving.

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

a) Give a brief account for number of sizing ingredients and their quantities used during size recipe formulation.
Explain the process of cooking of size paste with the help of a diagram.

b) Explain the drive to a modern sizing machine with the help of a neat diagram.

c) Compare shuttle changing mechanism with pirn changing mechanism.

Marks

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

a) Calculate the efficiency of a sizing machine from following particulars.

(i)	Yarn count	= 20^s Ne
(ii)	Length of yarn on Warper's beam	= 12000 meter
(iii)	Total number of ends	= 3800
(iv)	Speed of sizing machine	= 40 met/min.
(v)	No. of Lappers/3000 ends/1000 meter	= 2.5
(vi)	Average time to cut a Lapper	= 1.5 min
(vii)	Length of yarn on weaver's beam	= 1200 meter
(viii)	Time to doff a beam and insert a fresh lease	= 10 min
(ix)	Time to creel warper's beam and change sett	= 100 min
(x)	Miscellaneous loss of time	= 10 min

b) Explain the working of Bartlett let off motion used on autoloom with the help of a neat diagram.

c) List down various warp stop motions used on auto loom. What is their importance? Explain working of any one of them with the help of a neat diagram.

———