22677

24225

3 Hours / 70 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.

(8) Use of steam tables, logarithmic, Mollier's chart is permitted.

Marks

1. Attempt any FIVE : **10**

(a) List down steps for carrying out direct control of quality and productivity in weaving department.

(b) Elaborate the concept of 'Machinery Audit'.

(c) Elaborate the methodology adopted for seething norms for various key variables of each process.

(d) Explain the concept of patterning in winding and state causes and remedies of the same.

(e) Explain the concept of 'Knot factor' with the help of an example.

(f) Explain the methodology of process control activity followed in drawing-in department of weaving shed.

(g) List down parameters/points to be considered for selection and care of reed.

(h) Explain the concept of lappers at sizing. State causes and remedies of the same.

2. Attempt any THREE : **12**

(a) Elaborate the approach to process control activity for whole weaving department.

(b) Explain the methods to improve the fault removal efficiency at winding.

(c) List down the factors responsible for efficiency at winding.

(d) Explain various types of winding package defects, their causes and remedies.

3. Attempt any THREE : **12**

(a) Explain working of electronic slab catcher with the help of a schematic diagram.

(b) List down steps taken to minimize end breakage rate at warping.

(c) State precautions to be taken to improve quality of warping beams.

(d) Elaborate various factors on which productivity of warping depends.

4. Attempt any THREE : **12**

(a) Calculate the expected efficiency of a warping machine with the following particulars.

(i) Speed = 3 met/min

(ii) Set length = 18000 meters

(iii) Yarn length on cone = 54000 meters

(iv) Number of ends/beam = 500

(v) End breaks per 400 ends/1000 meters = 3

(vi) Time to mend a warp break = 35 sec

(vii) Time to change a beam = 500 seconds

(viii) Time to change a creel = 3000 seconds

(ix) Time loss due to miscellaneous = 25 seconds causes/1000 meters

(b) Elaborate the approach to process control at sizing.

(c) List down various sizing ingredients used for sizing of,

(i) Course cotton warp

(ii) Fine cotton warp

(iii) Polyester (Spun) warp

(d) State various factors responsible for size pick up and their control measures.

(e) Explain how productivity at sizing should be controlled.

5. Attempt any TWO : **12**

(a) Explain why stretch at sizing should be below certain limit. State various zones of conventional as well as modern sizing machine. Explain how stretch at every zone can be controlled.

(b) State various factors responsible for limitation of loom speed.

(c) Elaborate various factors affecting loom efficiency.

6. Attempt any TWO : **12**

(a) Explain the method adopted for assessing loom performance through snap study technique.

(b) Elaborate various factors to be considered for optimum loom allocation.

(c) State the importance of hard waste control at weaving. Explain how hard waste can be controlled at various weaving preparatory processes and at loom shed.
