313346

24225

03 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.

Marks

1. Attempt any FIVE of the following: **10**

a) State the objective of pirn winding.

b) List all mechanisms under Primary, Secondary and Auxiliary motions.

c) State the function of oscillating backrest.

d) Draw Ring temple with correct labels.

e) Classify warp protection mechanism into different categories.

f) Name any four fabric defects.

g) Suggest reasons for "Gouts".

Marks

2. Attempt any THREE of the following: **12**

a) Explain with neat sketch the working of yarn stop motion on pirn winding machines.

b) Elaborate with diagram the timing cycle of shedding, picking, beat-up mechanisms.

c) i) List the various types of healds and reeds.

ii) Find stock port reed count if EPI = 30 and no. of ends drawn per dent = 3.

d) Differentiate between 5-wheel and 7-wheel take-up mechanisms based on no. of wheels, value of dividend, possibilities of fractional PPI, ease of dividend calculation.

3. Attempt any THREE of the following: **12**

a) Elaborate the various ways to adjust picking force and picking timing cycle of side lever under pick mechanism.

b) Describe with neat sketch the construction and working of Negative let-off mechanism.

c) Distinguish between side and center weft fork mechanism based on position of weft detector, No. of picks after which mechanism acts, Suitability for multiple box mechanism, Risk of broken pick.

d) Suggest the causes and remedies for

i) Double end

ii) Readiness

4. Attempt any THREE of the following: **12**

a) Describe with neat sketch the passage of yarn through pirn winding machine.

b) Explain build of pirn in detail.

c) Determine production of weaving machine in meters per shift of 8 hours if PPI = 60, Machine speed = 180 rpm, Efficiency = 80%.

d) Describe with neat sketch the working of mechanical warp stop motion.

e) Suggest the causes and remedies for

i) Missing end

ii) Broken-pick

Marks

5. Attempt any TWO of the following: **12**

a) Calculate the production of pirn winding machine in meters per shift of 8 hours from below data

i) Surface speed of pirn = 100 meters/min.

ii) Traverse speed = 50 meters/min

iii) Efficiency = 75%

b) Describe with neat sketch the construction and working of negative tappet shedding mechanism.

c) Calculate the dividend of 7-wheel take-up mechanism from below data.

i) Ratchet wheel = 24 (Teeth)

ii) Pulling pawl = 1 (Tooth)

iii) Standard wheel = 36 (Teeth)

iv) Swing pinion = 24 (Teeth)

v) Change wheel = 1 (Tooth)

vi) Stud wheel = 89 (Teeth)

vii) Stud pinion = 15 (Teeth)

viii) Emery roller wheel = 90 (Teeth)

ix) Surface speed of emery roller = 15.05" (πD)

6. Attempt any TWO of the following: **12**

a) Describe with neat sketch the construction and working of cone-overpick mechanism.

b) i) Compile the reasons for shuttle-trap in the shed.

ii) Explain the working of fast reed warp protection mechanism with neat sketch.

c) Suggest the causes and remedies for:

i) Starting mark

ii) Weft bar

iii) Lashing-in