



# 17345

**15162**

**3 Hours / 100 Marks**

Seat No.

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- 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 :**

**20**

- a) State objectives of beam warping.
- b) What is the function of lease reed on sectional warping machine ?
- c) Why traversing motion is given to the reed on sectional warping machine ?
- d) What do you understand by the term 'Right hand dobbie' and 'Left hand dobbie' ?
- e) What is bottom close shed ? Explain it with a schematic diagram. What are its demerits ?
- f) State the function of modulator on rotary dobbie.
- g) State the function of cylinder selection mechanism on cross-border dobbie.
- h) List down different drop-box mechanisms you are aware of. State the function of these mechanism.
- i) What is weft mixing ? Why it is done ?
- j) What is the objectives of safety devices used on drop box 100 m ?
- k) State and explain principle of jacquard with the help of a schematic diagram.
- l) List down various type of jacquards you are aware of.
- m) Explain 'Casting out' operation in Jacquard designing.
- n) State the significance of 'count of point paper' in jacquard designing.

**2. Attempt any four :**

**16**

- a) Which different types of creels are used on beam warping machine ? Discuss their relative merits and demerits.
- b) Draw schematic diagram of sectional warping machine and lable the parts.

**P.T.O.**



- c) Compare tappet shedding mechanism with dobbie shedding mechanism.
- d) Compare conventional dobbie with a cam dobbie.
- e) Describe the type of shed formed on double lift single cylinder jacquard. What are its advantages over single lift single cylinder jacquard ?
- f) Write a detailed note on figuring capacity of jacquard.

**3. Attempt any four :****16**

- a) 'All modern Beam warping machines are provided with efficient braking systems which is very much essential for getting good beam quality' – Explain.
- b) A high speed beam warping machine is working with following particulars.  
Warping speed – 800 yards/min. weight of cone = 1.35 kg.  
Efficiency – 80%  
No of ends – 500  
Count of Warp. Yarn = 40<sup>s</sup> cotton  
Length of warp on beam = 10,000yd. Calculate
  - i) Production/shift of 8 hr in meters/shift
  - ii) Production/shift of 8 hr in kg/shift
  - iii) Calculate the number of warping beams produced/shift.
- c) Elaborate the method of lattice pegging of a right hand dobbie assuming your own peg-plan.
- d) State features and advantages of rotary dobbie.
- e) List down different types of harness ties used on Jacquard. Explain any one of them with the help of a neat diagram.
- f) Explain the method of card cutting and card lacing.

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

- a) i) Explain the process of beaming and creeling of colour pattern warp on sectional warping machine.  
ii) Explain the method of selection of healds on paper pattern dobbie with the help of a neat labelled diagram.
- b) Explain the working of Climax dobbie with the help of a neat diagram and names of parts.
- c) Explain Cowburn and Peck's drop-box motion with the help of a neat diagram.

**5. Attempt any two :**

a) i) A stripe warp of following particulars is to be made on a sectional warping machine.

(I) Total number of ends  $\rightarrow$  2240

(II) Number of ends per pattern  $\rightarrow$  32

(III) Number of extra pattern ends at both ends near selvages  $\rightarrow$  24

(IV) Selvedge ends at each side  $\rightarrow$  20

The creel capacity is 480 cones and width of warp in the reed is 35. Calculate

a) Number of complete patterns in warp.

b) Number of sections to be made.

c) Number of ends/section.

d) Width of warp on weaver's beam.

e) Width of section.

ii) Explain the method of transferring design on graph paper (point paper) from artist's sketch.

b) Explain the working of Eccle's drop box motion with the help of a neat diagram.

c) Explain the working of Double lift double cylinder jacquard with the help of a neat diagram.  
What are the advantages of this jacquard over double lift single cylinder jacquard ?

**6. Attempt any two :**

a) Explain the working of rotary dobbie with the help of a neat diagram.

b) Draw different types of cards used for drop box motion.

Draw pattern chain for following weft pattern without card saving.

White – 12 picks

Red – 4 picks

Blue – 2 picks

Yellow – 2 picks

Blue – 2 picks

Red – 4 picks

**Total** 26 picks

c) Describe construction and working of Electronic Jacquard. Describe its advantages over mechanical jacquard.

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