

22366

24225

03 Hours / 70 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) 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 objectives of warping.
 - b) Classify the warping machine.
 - c) State the function of sectional warping.
 - d) Explain the function of lease reed in sectional warping machine.
 - e) List down the various elements of size box.
 - f) Define migration in sizing.
 - g) Explain size add-on in sizing.
2. **Attempt any THREE of the following:** **12**
- a) Draw neat labelled sketch of passage of warp on sectional warping machine.
 - b) Explain various types of creels used on beam warping machine with their merits and demerits.
 - c) Draw neat labelled sketch of beam warping machine.
 - d) State the salient features of modern warping machine.

P.T.O.

3. Attempt any THREE of the following: 12

- a) Differentiate between direct warping and indirect warping.
- b) Explain the necessity of tensioners in warping machine. Also list down the various types of tensioners and explain any two of them.
- c) A stripe warp has 42 stripes of 40 ends each, 40 extra pattern ends and 14 salvedge ends on both sides. Find no. of sections to be produce if creel capacity is 500. Explain how sections are arranged.
- d) Explain importance of following size paste properties:
 - i) Viscosity
 - ii) Concentration

4. Attempt any THREE of the following: 12

- a) Enlist various sizing ingredients used for preparation of size paste. Explain the function of any two of them.
- b) Describe the pressure cooker used for cooking size paste with neat sketch.
- c) Calculate efficiency of the sizing machine, if the actual production of the machine is 42000metres/shift of 8 hours and it runs with the speed of 120metres/minutes.
- d) Explain the conventional sow box with neat sketch.
- e) Explain the functions of the following headstocks elements of sizing machine:
 - i) Marking and measuring device
 - ii) Expanding comb
 - iii) Sheeting roller
 - iv) Drag rollers
 - v) PIV gears
 - vi) Beam press trolley

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

- a) Explain the importance of stretch in the sizing. Also suggest methods for measurement of stretch and its control at different zones of sizing machine.
- b) Calculate the size add-on and size pick-up percentage from the following parameters:
 - i) Number of ends in the weavers beam = 2500
 - ii) Weight of the dry sized warp in pounds = 100
 - iii) Length of the sized yarn = 1000 yards
 - iv) Weight of the wet sized yarn = 120 lbs.
 - v) Weight of the un-sized yarn = 90 lbs.
- c) Calculate the production of a beam warping machine in meters/shift and kg/shift using following data
 - i) Warping speed - 500 yards/min
 - ii) Efficiency of machine - 64%
 - iii) No. of ends on beam - 540
 - iv) Count of yarn warped - 50^sNe

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

- a) Describe the passage of the warp yarn through multi cylinder sizing machine with neat sketch.
 - b) Describe the sectional warping to produce the colour pattern by considering following points.
 - i) Leasing
 - ii) Beaming
 - iii) Greeling
 - c) Describe the functions of the following:
 - i) Squeeze roller
 - ii) Immersion roller
 - iii) Drag roller
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