22366

21819

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 of the following: **10**

a) State the objects of warping.

b) List the type and application of different warping machines.

c) Draw diagrams of different types of winding packages used for warping.

d) Select the warping method for multicolor warp.

e) State the two principles on which automatic size box works.

f) Define size add on percentage.

g) Explain the importance of stretch and it's control.

Marks

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

a) Differentiate between sectional warping and beam warping system.

b) Explain different types of creels used on warping machine with their merit and demerits.

c) Explain the features of modern sectional warping machine.

d) Calculate production of Beam warping machine in Kg/shift of 8 hours working with following particulars:

No of ends on beam – 800

Speed of machine – 600 m/min.

Efficiency – 60%.

Count of yarn – 10 Tex.

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

a) Draw the passage of material through Beam warping machine and label the parts.

b) State the functions of following parts on warping machine:

- Braking arrangement
- Expanding comb
- Pressure roller on beam
- Stop motions.

c) Mill wants to produce stripe shirting fabric. The epi is 80 and reed space is 60. The number of sections on drum are 12. Calculate creel capacity required.

d) State the importance of congealing properly in sizing along with its demerits.

Marks

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

a) Explain the steps involved in preparation of size paste.

b) Draw the sketch of pressure cooker used in sizing and label the parts.

c) Explain the working of automatic size box with sketch.

d) Explain the factors affecting the rate of drying of warp sheet on cylinders.

e) State various factors governing the pickup of size paste.

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

a) Determine the efficiency of warping machine working with following particulars:

- Speed of m/c -800 m/min
- Number of stoppages/400 ends/ 1000 m-2
- Set length in meters – 20,000 m
- Yarn length on cone (m) – 60,000 m
- No of ends per beam – 500
- Time to mend a warp break – 40 sec
- Time to change beam – 300 sec.
- Time to change creel – 1200 sec.
- Time loss due to miscellaneous – 1000 m- 10sec.

b) State the factors affecting the migration of ends in a sizing.

c) Calculate the total stretch percentage in the sizing machine for 300 m warp sheet unwound from warper's beam if stretch % at creel zone is 0.5% stretch % at wet zone. 1.75% and stretch 1% at winding zone is 0.5%.

Marks

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

a) Explain the passage of yarn through sectional warping machine with sketch.

b) Draw the passage of yarn through multicylinder sizing machine and label the parts.

c) Draw the sketch of various types of creels used on sizing machine and state their merits and demerits.

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