313347

12526

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 answer 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 objectives of direct warping process.

b) State the function of following sectional warping components:–

i) Separating rod

ii) Leasing reed.

c) Name the type of warping required to produce beam used to form colored checks fabric. Justify your opinion.

d) Draw microscopic structure of any two starch material.

e) List factors governing formulation of size paste.

f) List the factors affecting rate of drying in sizing machine.

g) Calculate the dead loss percentage if sized warp weight = 5000 kg, unsized weight = 4000 kg and sizing ingredients = 2000 kg.

P.T.O.

Marks

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

a) Calculate the production of direct warping machine in meters per shift of 8 hrs. from following parameters, Machine winding speed = 800 meters per minute, Efficiency of machine = 80%.

b) List the sizing paste ingredients with their specific role.

c) Draw the passage of yarn through multicylinder sizing machine with correct labels.

d) Describe the following factors affecting size pick up percentage: factors belonging to yarn particulars, factors belonging to properties of size paste, factors belonging to machine.

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

a) Explain the function of stop motion in direct warping and its significance on quality of beam.

b) Describe the construction and working of pressure cooker used to prepare size paste.

c) i) List the types of creel used on sizing machine.

ii) Draw over and under creel, vertical creel.

d) i) Define stretch percentage in sizing.

ii) Explain the cases of stretch in creel zone, sizing, drying and splitting zone and winding zone.

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

a) i) List types of warping creels.

ii) Write two merits and two demerits of any one of the creel.

b) Explain following sectional warping process in detail: leasing, and beaming.

c) State the importance of size paste properties : keeping and congealing.

d) Describe with neat sketch the working of modern size box.

e) i) Define Migration and Lappers.

ii) Enlist the factors affecting migration of ends at sizing.

Marks

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

a) State the function of following headstock components in direct warping machine: pressure drum, expanding comb, length measuring device.

b) Illustrate with neat sketch the passage of warp through sectional warping machine.

c) Draw leasing and splitting arrangement for eight cylinder sizing machine.

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

a) Demonstrate the passage of yarn through direct warping machine with neat sketch.

b) Calculate number of sections section width in inches and production of sectional warping machine in meters per shift of 8 hours from following parameters :–

Max Creel Capacity = 800.

Ends per inch (EPI) = 40.

Width of beam in inches = 40.

Beaming speed = 200 meters per minute.

Efficiency of machine = 50%.

c) Illustrate with neat sketch working of following control devices used in size box.

i) Temperature control device – “Thermostat tube”.

ii) Size paste control device – “Electrical system”.

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