313347

24225

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.

(8) Use of Steam tables, logarithmic, Mollier's chart is permitted.

Marks

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

a) Draw diagrams of yarn packages having over end withdrawal and side withdrawal.

b) List down types of tensioners used on beam warping machine and state its importance.

c) State function of leasing reed on sectional warping machine.

d) State function of anti-static agent and deliquescent agents used in size paste.

e) Give classification of adhesives used in size mix.

f) Explain concept of wet splitting and state its advantage.

g) Define size pick and give expression (formula) for the same.

P.T.O.

Marks

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

a) Explain passage of warp on beam warping machine with the help of a neat diagram.

b) State objectives of sectional warping machine. Explain the manufacturing of stripe shirting of polyester filament yarn with the help of a flow chart.

c) List down various sizing ingradients used in preparation of size paste. State function of each of them.

d) List down different types of creels used on sizing machine. Draw diagrams of each of them.

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

a) Enlist different types of warping machines used in textile industry. Differentiate between them.

b) Explain working of sectional warping machine with the help of a neat diagram.

c) Explain the process of preparation of size paste with the help of a diagram.

d) Draw diagram of a modern size box. Label the components of the same. State function of each component.

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

a) Draw diagram of headstock of a beam warping machine and label all the components. State function of each component.

b) It is required to produce 1000 meters of polyester shirting fabric. A weaver's beam is to be produced on sectional warping machine with following particulars –

i) Ends/inch = 52

ii) Fabric width = 84 inches

iii) Creel capacity = 240

iv) Warp crimp% = 11.

Calculate –

i) Warp length

ii) Beam width

Marks

iii) Section width

iv) Total number of sections

v) Total ends.

c) State importance of drying on sizing machine. List down different types of drying methods used on sizing machine. Compare their relative merits and demerits.

d) Enlist various factors affecting size pickup.

e) Define stretch. State importance of controlling of stretch on sizing machine. Elaborate the method of measurement of stretch at creel zone, sizing zone, drying zone and splitting zone.

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

a) Explain causes and remedies of following warping beam defects –

i) Uneven density

ii) Ridges

iii) Bulged or sunken selveges

iv) Non-uniform length.

b) State functions of following components of sectional warping machine –

i) Separating nods

ii) Leasing need

iii) Traversing reed.

Explain leasing process and its importance in detail.

c) Draw diagram of passage of warp on multi-cylinder sizing machine and label the parts.

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

a) A warping machine is warping 30^s cotton yarn at a warping speed of 600 yards per minute. Calculate the production in yards and kg in a shift of 8 hours if the number of ends on beam is 540 and efficiency of machine is 70%. Also calculate the number of beams produced in a shift of 8 hours if the length of warp on each beam is 20160 yards.

Marks

b) List down various components of head stock and state functions of each of them.

c) The stretch in a sizing machine processing cotton warp is 1%, 3% and 2% in the creel zone, sizing zone and drying zone respectively. If the warp crimp in the woven fabric is 10%, determine the length of fabric that could be produced from 1000 meters of warp sheet in each of the warper's beam.

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