

22365

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

- State the objectives of carding process.
- Classify the fiber hooks in the card sliver. Also write the percentage of hooks.
- State the function of auto-levelers at card.
- Define the term “Draft” with formulae.
- State the applications of the integrated monitoring system on draw-frame.
- State the objects of combing.
- State the function of top nipper and bottom nipper and their motions in combing machine.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Differentiate between lap feed and chute feed system.
 - b) Describe the effect of card setting on sliver quality.
 - c) Describe the Shirley drafting system with neat sketch.
 - d) Total draft between front and back roller of drawing frame is 5.86. Calculate the intermediate drafts in each pair of rollers if the draft between front and third is 4.65 and that between second and third roller is 45% greater than draft between third and fourth roller.
- 3. Attempt any THREE of the following:** **12**
- a) Elaborate on licker in zone of the carding machine.
 - b) Classify the various card clothing. Also explain them with neat sketch.
 - c) Draw neat labelled sketch of passage of material through draw frame machine.
 - d) State the salient features of modern high speed draw frame machine.
- 4. Attempt any THREE of the following:** **12**
- a) State the function of flats and doffer on carding machine.
 - b) Suggest the distribution of draft in various zones of drafting system in draw frame to get uniform sliver.
 - c) List down various defects in the draw frame. Explain any two of them with its causes and remedies.
 - d) Define forward feed and backward feed in the comber.
 - e) State the function of nippers and top comb in comber.

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

- a) List down various combing preparatory sequences followed in spinning mills. Explain effect of pre-comb draft on comber performance with respect to
 - i) Parallelization of fibers
 - ii) Evenness of lap sheet
 - iii) Sheet thickness
 - iv) Disposition of hooks
- b) Calculate the production of carding machine in pounds/shift of 8 hours from the following particulars:
 - i) Doffer speed = 40rpm
 - ii) Weight of sliver = 5.00 gms/mt
 - iii) Efficiency = 90%
 - iv) Doffer dia = 27 inch.
- c) List down the factors affecting the combing performance. Also explain any four of them.

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

- a) Suggest the various defects in comber machine with its causes and remedial action.
 - b) Describe the sliver lap machine with neat sketch.
 - c) Describe the passage of material through comber machine with neat labelled sketch.
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