

22365

21222

3 Hours / 70 Marks

Seat No.

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15 minutes extra for each hour

- 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.

Marks

1. **Attempt any FIVE of the following:** **10**
- a) List the tasks of card.
 - b) State the various percentages of fibre hooks in card web.
 - c) Classify the card clothing and draw the sketch of each type.
 - d) State the objects of Draw frame.
 - e) State the delivery speed and production per delivery in modern draw frame.
 - f) State the different yarn characteristics that are improved due to combing.
 - g) Define forward feed and backward feed comber.

P.T.O.

2. Attempt any THREE of the following: 12

- a) Draw the passage of material through carding machine showing speeds of different parts.
- b) Elaborate different criteria for selection of card clothing.
- c) List the factors affecting draft depending on fibre characteristics.
- d) Calculate the production of a draw frame in kg/shift of 8 hrs/delivery working with following particulars -
Front roller delivery speed - 600 m/min
Number of doubling - 8
Hank fed - 4 Ktex
Draft - 6
Efficiency - 80%

3. Attempt any THREE of the following: 12

- a) Draw the sketch of carding zone between cylinder and flats, give its setting and list the function of flats.
- b) Explain the working of medium term autoleveller on card with illustrative sketch.
- c) Draw the sketch of any modern drafting system, illustrate settings and roller diameters. (eg. 3/4, 3/3, 4/3, 5/4)
- d) Calculate the production of sliver lap machine in kg/shift of 8 hours working with following particulars-
Speed of m/c - 80m/min.
Sliver hank fed - 5 ktex
Number of doublings - 18
- e) Draft of sliver lap - 1.4,
efficiency - 80%

- 4. Attempt any THREE of the following:** **12**
- a) Explain the need for auxiliary carding devices and list various auxiliary carding devices on modern card.
 - b) Explain the principle of drafting in Draw frame
 - c) State modern developments in Draw frame.
 - d) State the factors affecting on combing.
 - e) Draw and label, passage of material through comber.
- 5. Attempt any TWO of the following:** **12**
- a) Calculate the production of card working with following particulars in kg/shift of 8 hrs.
Delivery speed - 180 m/min.
hank of silver - 5ktex
Efficiency - 90%
 - b) List the advantages of high performance auto leveling Draw frames.
 - c) Differentiate unicombed and half lap.
- 6. Attempt any TWO of the following:** **12**
- a) Draw the passage of material through Ribbon lap machine and label the parts.
 - b) List the features and specifications of modern comber.
 - c) Calculate production of comber in kg/shift of 8 hrs working with following particulars -
 - nips/min 200
 - feed/nip 0.5 cm.
 - waste (noil) 15%
 - no. of heads 8
 - efficiency 80%
 - lap fed 60ktex
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