

22365

22223

3 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) 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 function of trumpet used in carding.
  - b) List the names of different hooks in card silver and write down their percentage.
  - c) State the function of stripping process in card maintenance.
  - d) Define cots buffing.
  - e) Define auto levelling.
  - f) State the object of silver lap.
  - g) Define forward feed.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Describe the operating principles of carding.
  - b) State the features of modern card.
  - c) Describe with neat sketch passage of material through draw frame.
  - d) Calculate the production of draw frame from the following particulars
    - i) Front roller speed - 190 rpm
    - ii) Front roller diameter - 1.4"inch.
    - iii) Tension draft - 1.02
    - iv) Hank of silver delivered - 0.16
    - v) Efficiency - 82% No. of deliveries - 2.
- 3. Attempt any THREE of the following:** **12**
- a) Draw and label passage of materials through carding.
  - b) State the application of stationery flats used in carding also show by line diagram.
  - c) Explain the factors affecting the draft in drawframe based on fibre material.
  - d) State the effect of pre comb draft on combing.
- 4. Attempt any THREE of the following:** **12**
- a) Differentiate any four points between lap feed and chute feed.
  - b) Explain the importance of draft distribution in drawframe and give draft distributions.
  - c) List the names of top roller weightening system used in drawframe and with line diagram explain them.
  - d) State the causes and remedies of drawframe silver defects.
  - e) Differentiate between ribbon lap and lap former.

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

- a) Classify the card clothing and explain them.
- b) State the salient features of high production draw frame.
- c) Calculate the production of comber from the following particulars:
  - i) Nips/min - 300
  - ii) Weight of lep ted - 72 gm/yd.
  - iii) feed/nip - 0.23 inch.
  - iv) Efficiency - 88%
  - v) Noil - 14%
  - vi) No of heads - 8calculate in kgs/shift of 1.5 hrs.

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

- a) Calculate the production of lap former in pounds/shift of 7.5 hrs. from the following particulars:
    - i) feed silver hank - 0.12
    - ii) No of doubling - 24
    - iii) Draft - 1.3
    - iv) Delivery speed - 86 yards/min
    - v) Efficiency - 90%
  - b) Explain the effect of following gauges on comber sliver quality
    - i) Step gauge
    - ii) Brass groove gauge
    - iii) Distance gauge
  - c) Explain the effect of machine and material parameters on comber sliver quality
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