

22365

23242

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) Enlist various combing preparatory machine sequences.
 - b) State the objectives of comber.
 - c) Define the term stripping action.
 - d) Enlist the name of auxiliary carding devices.
 - e) Give classification of fibre hook at card with their percentage.
 - f) A draw frame having a draft of 6.8 with no. of doublings of 6. Calculate the hank of sliver fed, if the hank of sliver delivered is 0.17.
 - g) State the feature of modern carding machine.

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2. Attempt any THREE of the following: 12
- a) Draw a neat labelled sketch of carding machine.
 - b) State the features of modern draw frame.
 - c) Explain in brief parameters influencing combing operation.
 - d) Calculate production of carding m/c using following particulars in kg/shift of 8 hrs.
 - i) Doffer speed = 40rpm
 - ii) Doffer diameter = 27"
 - iii) Mechanical Draft = 106
 - iv) hank of lap fed = 0.00/70
 - v) efficiency = 92%
 - vi) Waste collected at card = 5.5%
3. Attempt any THREE of the following: 12
- a) State any four defects, their causes and remedies at pre-comb process.
 - b) Draw and describe the working of sliver lap machine.
 - c) Describe the effect of following feed system on following feed system on percentage of noil extracted.
 - i) Forward feed
 - ii) Backward feed
 - d) Suggest the following setting for processing cotton fibre through carding machine.
 - i) lickerin to cylinder
 - ii) cylinder to doffer
 - e) Classify the card clothing and state the technical significance of each.

- 4. Attempt any THREE of the following:** **12**
- a) Explain the following points on carding.
 - i) Cylinder
 - ii) Doffing
 - iii) Detaching
 - iv) Sliver coiling
 - b) A carding machine having draft of 101 is fed with lap of 0.0014 hank. Calculate the hank of delivered sliver if waste extracted at card is 4%.
 - c) With neat labelled sketch describe passage of material through draw frame.
 - d) Autoleveller maintains the linear density of delivered sliver at draw frame, justify.
- 5. Attempt any TWO of the following:** **12**
- a) Calculate the production of draw frame with following data in kg/shift of 7.5 hrs.
 - i) Front Roller Speed = 180rpm.
 - ii) Front roller radius = 0.7"
 - iii) hank of delivered sliver = 0.12
 - iv) Tension draft between front Roller and coiler calender roller = 1.00
 - v) Efficiency = 90%
 - vi) No. of deliveries = 2
 - b) Calculate the production of lap former machine in lbs/shift of 8 hrs from following data.
 - i) Feed sliver hank = 0.11
 - ii) No. of doublings = 22
 - iii) Delivery speed = 95 yards/min
 - iv) Draft = 1.31
 - v) Efficiency = 90%
 - c) State the features of modern comber.

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

- a) Suggest any six defects, their causes and remedies at comber machine.
 - b) Explain in brief different types of drafting system used on draw frame.
 - c) Calculate production of comber in kg/shift of 7.5 hrs from following particulars.
 - i) Nips/min = 250
 - ii) Feed roller diameter = 1"
 - iii) Weight of lap = 75 gm/mtr
 - iv) Noil % = 18%
 - v) No. of heads = 8
 - vi) Efficiency = 88%
 - vii) Ratchet wheel teeth = 10T
 - viii) Teeth of pawl = 1T
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