

313345

12526

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 answer 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**
- a) State the objectives of the carding.
  - b) State the function of mote-knives in the carding.
  - c) Explain the stripping operation in the carding maintenance.
  - d) State the role of Auto-levelers at card.
  - e) State the objectives of the draw frame.
  - f) State the need of the combing preparatory processes in combing.
  - g) State the objectives of the comber.

P.T.O.

- 2. Attempt any THREE of the following: 12**
- a) Enlist various types of card clothing. Also explain them with neat sketch.
  - b) State the importance of Grinding operation at card maintenance. Also explain different types of grinding.
  - c) Explain conventional 3/3 drafting system with neat sketch.
  - d) State the modern development in lap preparation machine.
- 3. Attempt any THREE of the following: 12**
- a) Explain the sliver formation in the carding by considering following points :-
    - i) Sliver condensing
    - ii) Trumpet
  - b) State the modern developments in carding machine.
  - c) Explain the various roller weighing system used in the drafting system.
  - d) Explain the function of the following parts of the comber machine :-
    - i) Top comb
    - ii) Detaching roller.
- 4. Attempt any THREE of the following: 12**
- a) Calculate the production per shift of 8 hours of draw frame which its running at 90% efficiency. Speed of  $1\frac{1}{4}$  ' from roller in 350 rpm. weight of the sliver fed is 70 grains/yard. The draft is 6.4 and number of doubling for six delivery is six.
  - b) Explain roller slip in the drafting with its causes and remedial action.
  - c) Explain the influence of machine components on combing performance.

- d) Draw neat labelled sketch of Index wheel of Rectilinear comber.
- e) Platt's comber works with following particulars :-
- i) Lap weight = 450 grains/yd
  - ii) Feed/nip = 0.18 inches
  - iii) Nip/min = 98
  - iv) Nail % = 14
  - v) No. of heads = 06
  - vi) Efficiency = 85%

Find the production per shift of 8 hours.

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

- a) The production of a card per hour is 10 lbs. There are 30 cards. Waste taken out at each card is 5%. The hank of the lap fed to the card is 0.0012. Calculate at what speed, the 9" lap roller of a switcher should run with an efficiency of the machine being 85%.
- b) Describe the passage of material through draw frame machine with neat sketch.
- c) Explain the passage of material through sliver lap machine with neat sketch.

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

- a) Describe the passage of material through carding machine.
  - b) Explain the ribbon lap machine with neat sketch. Also state the merits and demerits of sliver lap and ribbon lap.
  - c) Describe the passage of material through rectilinear comber with neat sketch.
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