

17344

15116

3 Hours / 100 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
- (2) Illustrate your answers with neat sketches wherever necessary.
- (3) Figures to the right indicate full marks.
- (4) Assume suitable data, if necessary.
- (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. **Attempt any FIVE of the following :** **20**
- a) State objectives of carding. Explain the concept of individualisation of fibres.
 - b) State advantages of chute feed system over lap feed system.
 - c) What is the object of stripping ? Explain how it is done on carding machine.
 - d) Explain different card clothing with help of diagram.
 - e) State objectives of draw frame. Explain concept of parallisation of fibres.
 - f) Explain objective auto levelling system in drawframe. How it works ?
 - g) Explain grinding operation in card maintenance. State its usefulness.
 - h) Draw diagram of 4/3 roller drafting system on draw frame and explain its working.

P.T.O.

- 2. Attempt any TWO of the following :** **16**
- a) Describe the passage of material through carding machine with neat sketch. Label the parts.
 - b) Give details of flats on carding machine with respect to following points.
 - (i) Total number of flats on carding machine.
 - (ii) Number of flats in actual working region.
 - (iii) Function of flats
 - (iv) Movement of flats
 - (v) Speed of flats
 - (vi) Setting between flats and cylinder wirepoint
 - (vii) Importance of this setting
 - (viii) Cleaning positions in the region of flats
 - c) Explain different types of auto leveling equipments in carding. Give their classification.
- 3. Attempt any TWO of the following :** **16**
- a) State the modern developments in carding.
 - b) State the modern developments in the draw frame.
 - c) Explain defects in carding with their causes and remedies.
- 4. Attempt any TWO of the following :** **16**
- a) Explain doffer zone in carding with respect to
 - (i) function of doffer
 - (ii) doffing operation
 - (iii) detaching operation
 - (iv) diagram
 - (v) coiling operation

- b) Give detailed account for speeds and setting between different parts on a modern carding machine.
- c) Describe the passage of material through draw frame machine with neat sketch.

5. Attempt any TWO of the following : 16

- a) Explain drafting system in draw frame. Also explain factors dependent upon the drafting arrangement.
- b) Explain the integrated monitoring system and sliver data in draw frame.
- c) Explain defects in sliver draw frame with their causes and remedies.

6. Attempt any TWO of the following : 16

- a) Calculate the production of a card per hour if the draft between the lap roller and doffer is 80. The draft between the doffer and the calender roller is 1.02. Draft between the calender roller and the coiler calender roller is 1.06. Hank of the lap is 0.00146. Waste removed during carding amounts to 5%. The 27" dia of doffer is running at 12 rpm with an efficiency of 85%.
 - b) Explain taker - in zone in details.
 - c) (i) Calculate the efficiency of draw frame in which the actual production for 8 deliveries is 4212 lbs for 42 hours. The 2" dia. calender roller runs at 200 rpm and delivers 50 grains/yds of sliver ?
(ii) Explain various elements of drafting arrangements.
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