

17462

11819

3 Hours / 100 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 TEN of the following:** **20**
- a) State the objects of combing.
 - b) What is the function of the top comb?
 - c) Why there is need of combing preparatory machines?
 - d) State the objectives of speed frame.
 - e) What do you mean by flyer leading? Explain.
 - f) State the function of traveller.
 - g) Explain forward and backward feed in combing.
 - h) Enlist different hooks in card sliver. Also write their percentage.
 - i) State the advantages of super-lap machine.
 - j) State the function of detaching roller.

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- k) What is the role of balloon control ring in ring frame.
- l) What is the winding and binding coils.
- m) Explain the role of stop motion in the speed frame.

2. Attempt any TWO of the following: 16

- a) Describe the passage of material through sliver lap machine with neat sketch. Also state the advantages and disadvantages of sliver lap.
- b) Explain the passage of material through speed frame with neat sketch.
- c) Explain various combinations of ring and travellers with neat sketch.

3. Attempt any TWO of the following: 16

- a) Describe the passage of material through the ring frame with neat label diagram.
- b) Explain the building mechanism of speed frame with neat sketch.
- c) Explain the causes and remedies of defective production of comber.

4. Attempt any TWO of the following: 16

- a) State the modern developments in ring frame.
- b) Explain the passage of the material through the comber with neat sketch.
- c) Calculate the production of a speed frame in rounds/shift of 8 hours from the following data:
 - (i) TPM = 63
 - (ii) Draft = 11
 - (iii) Spindle speed = 810 rpm
 - (iv) Weight of sliver fed = 52 grams/yard.
 - (v) Efficiency = 90%

5. Attempt any TWO of the following:**16**

- a) Explain the influence of lap preparation on combing.
- b) (i) Explain the spindle and flyer in the speed frame with neat sketch.
(ii) State the modern developments in the speed frame.
- c) Calculate the production of Ring frame in kg/shift and grams/spindle/hour from following particulars:
 - (i) Twist multiplier = 4.0
 - (ii) Spindle speed = 18500
 - (iii) Count = 30^s Ne
 - (iv) Efficiency = 90%
 - (v) No. of spindles/frame = 1000

6. Attempt any TWO of the following:**16**

- a) What is the fractionating efficiency of comber? Explain the factors affecting the fractionating efficiency.
 - b) Explain the causes and the remedies of yarn faults in the ring frame.
 - c) Differentiate between flyer leading and bobbin leading.
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