

# 17462

**21819**

**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 TEN of the following:** **20**
- What is precomb draft?
  - State objectives of silver lap.
  - What is the function of top comb in comber?
  - What do you mean by noil?
  - What is necessity of combing preparatory processes?
  - State objectives of speed frame.
  - Why even no of machines are used between carding and combing?
  - What is the function of ring in ring frame?
  - State objectives of ring frame.
  - Explain about wire profile of Traveller.
  - What is the role of separators in ring frame?
  - What do you mean by spindle leading in speed frame?

P.T.O.

- m) Explain traveller numbering system.
- n) State objectives of combing.

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

- a) Describe the construction and working of silver lap machine with neat sketch.
- b) Describe passage of material through ring frame machine with neat sketch.
- c) Describe construction and working of speed frame with neat sketch.

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

- a) Calculate the production in kgs/shift of 8 hrs ring frame from following particulars:
  - (i) Spindle speed – 20,000 rpm
  - (ii) Twist multiplier – 4.0
  - (iii) Count – 26 Ne
  - (iv) Efficiency – 90%
  - (v) No of spindles/ frame – 1000Also convert this production to 20<sup>s</sup> conversion.
- b) State modern developments in speed frame.
- c) Describe passage of material through comber.

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

- a) Explain influence of lap preparation on combing of:
  - (i) Evenness of lap sheet
  - (ii) Depositions of the hooks
- b) Differentiate between flyer leading and bobbin leading.
- c) Explain different types of ring and traveller assembly with neat sketch.

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

- a) Calculate the production of a comber in kgs/shift of 8 hours from following data:
- (i) Efficiency – 90%
  - (ii) No of heads – 08
  - (iii) Noil – 12%
  - (iv) Height of lap – 701 grains/yard
  - (v) Feed roller dia – 1 inch
  - (vi) No of teeth pushed by paura/nip – 2T
  - (vii) Nips/min – 220
- b) Explain building mechanism of speed frame.
- c) With neat sketch describe ring spindle and bolsters used in ring frame.

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

- a) Explain ribbon lap machine with its advantages and disadvantages with neat sketch.
- b) State the modern developments in ring frame.
- c) State the functions of following parts of speed frame machine:
- (i) The spindle
  - (ii) The flyer
  - (iii) Creel
  - (iv) Presser arm
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