

17462

21415

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
- List the effect of short fibres on yarn quality.
  - Why combing preparation is necessary?
  - List objects of comber.
  - What are the different types of hooks and their percentage of fibres in carded sliver?
  - State the objects of Ribbon lap machine.
  - What is importance of uni comb?
  - State the objects of speed frame.
  - List function of cone - drums used in speed frame.

P.T.O.

- i) Write the importance of pressure arm in speed frame flyer.
- j) What do you mean by suspended flyer?
- k) List the objects of ring frame.
- l) What is binding coil?
- m) Why antiwedge rings are used in Ring frame?
- n) Why aprons are used in drafting system of ring frame?

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

- a) Explain with neat sketch passage of material through Ribbon lap machine.
- b) Describe with neat sketch passage of material through comber.
- c) What is the effect of lap evenness on combing?

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

- a) Calculate the production of a comber in kgs/shilt of 8 hours from the following particulars:
  - (i) Weight of lap - 698 grains/yard
  - (ii) Efficiency - 88%
  - (iii) No. of heads - 8
  - (iv) Noil - 14%
  - (v) Feed roller dia - 1"
  - (vi) No of teeth pushed by pawa/nip = 2T
  - (vii) Nips / min - 220
- b) Explain neat sketch step gauge setting and its effect on combing.
- c) Differentiate between flyer leading and bobbin leading.

- 4. Attempt any TWO of the following:** **16**
- a) What are modern developments in speed frame?
  - b) Describe building mechanism of a speed frame.
  - c) List the change places in speed frame and also write importance of these change places.
- 5. Attempt any TWO of the following:** **16**
- a) Calculate the production of speed frame in kgs/shilt of 8 hrs from the following data:
    - (i) Spindle speed - 1000 rpm.
    - (ii) TPM (Twist/mt) - 63
    - (iii) Weight of sliver fed - 55 grains/yard
    - (iv) Draft - 12
    - (v) Efficiency - 90%
  - b) What are task of traveller? Also write traveller numbering system.
  - c) Discuss with neat sketch builder motion of a ring frame.
- 6. Attempt any TWO of the following:** **16**
- a) Describe with neat sketch variable drive ring frame also state any four modern development in ring frame.
  - b) What is importance of monitoring system? Also write about ring data system.
  - c) Calculate the production of ring frame from the following data in kgs/shilt of 7.5 hours.
    - (i) Spindle speed - 20000 rpm.
    - (ii) Twist multiplier - 4.1
    - (iii) Count spum - 26 Ne
    - (iv) Efficiency - 95%
    - (v) No of spindle/frame - 1000also convert this production to 20<sup>s</sup> conversion.
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