

# 17462

**15162**

**3 Hours / 100 Marks**

Seat No.

--	--	--	--	--	--	--	--

- 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) Write the effect of noil on yarn quality.
  - b) Why combing preparation is necessary?
  - c) Write the tasks of comber.
  - d) Write the effect of pre-comb draft on noil.
  - e) Write the objects of super lap machine.
  - f) Define forward and backward feed in combing.
  - g) Write the objects of speed frame.
  - h) Write the different stop motions in speed frame.
  - i) Write the function of flyer in speed frame.
  - j) What do you mean by suspended flyer?

P.T.O.

- k) Write the objects of building mechanism of a ring frame.
- l) What is winding and binding coil? And write ratios between them.
- m) Why antiwedge rings are used in ring frame?
- n) Write the function of traversing bar in ring frame drafting system.

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

- a) With neat sketch explain passage of material-through sliver lap machine.
- b) With neat sketch explain passage of material through comber.
- c) Write the effect of lap thickness and pre comb draft on combing.

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

- a) Calculate the production of comber in pounds/shilt of 7.5 hours from the following particulars.
  - (i) Weight of lap - 710 grains / yard
  - (ii) Efficiency - 90%
  - (iii) No of heads - 8
  - (iv) Noil extracted - 16%
  - (v) Feed roller diameter - 1 inch.
  - (vi) No. of teeth pushed forward by Pawl/Nip - 2
  - (vii) Nips/min - 320
- b) With neat sketch explain distance gauge setting and its effect on combing.
- c) Write the causes and remedies of defective production in comber.

- 4. Attempt any TWO of the following:** **16**
- a) Write the modern developments in speed frame.
  - b) With neat sketch explain building mechanism of speed frame.
  - c) Write the causes of soft bobbing in speed frame.
- 5. Attempt any TWO of the following:** **16**
- a) Calculate the production of a speed frame in pounds/shilt of 7.5 hours from the data:
    - (i) Spindle speed - 810 rpm
    - (ii) Twist / meter (TPM) - 61
    - (iii) Weight of sliver fed - 52 grains/nd.
    - (iv) Draft - 11
    - (v) Efficiency - 92
  - b) With neat sketch explain any four rings used in ring frame.
  - c) With neat sketch describe different types of traveller of a ring frame.
- 6. Attempt any TWO of the following:** **16**
- a) Write the causes of end breakages in ring frame.
  - b) With neat sketch describe passage of material through ring frame.
  - c) Calculate the production of a ring frame in grams/spindle/hour and kgs/shilt of 7.5 hours/frame.
    - (i) Spindle speed - 18000
    - (ii) Twist multiplier - 4.0
    - (iii) Count span - 24 Ne
    - (iv) Efficiency - 92%
    - (v) No. of spindles/frame - 1000
-