

# 22461

**24225**

**3 Hours / 70 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) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

- 1. Attempt any FIVE of the following :** **10**
- Explain the use of Aprons in roving frame.
  - Explain the lappet on ring frame machine with neat sketch.
  - Define spinning geometry.
  - State the importance of traveller clearer.
  - List down various package faults in the ring frame.
  - State the objective of speed frame.
  - State the advantage of automatic doffing in speed frame.

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- 2. Attempt any THREE of the following :** **12**
- a) Explain the flyer and spindle arrangement in the roving frame with neat sketch.
  - b) Explain the drafting system on roving frame with neat sketch.
  - c) Enlist various creels used on the ring frame machine. Explain any one of them with neat sketch.
  - d) State the concept of flyer leading.
- 3. Attempt any THREE of the following :** **12**
- a) Describe the mechanism of roving frame with neat sketch.
  - b) Explain automation in roving frame by considering following points.
    - i) Transport of roving bobbin
    - ii) Removed of waste
  - c) Explain balloon control rings with neat sketch.
  - d) A roving frame has 100 spindles which run at 600 rpm. The hank delivered is 0.8 and twist multiplier used is 1.4. Find the production per spindle.
- 4. Attempt any THREE of the following :** **12**
- a) Describe the passage of material through roving frame with neat sketch.
  - b) State the objectives of ring frame. Explain the conventional drafting system with neat sketch on ring frame.
  - c) Explain the rings used on ring frame machine by considering following points.
    - i) Function
    - ii) Ring material
  - d) Enlist various types of traveller. Draw neat labelled sketch of various types of travellers.
  - e) Explain various types of rings with neat sketch.

- 5. Attempt any TWO of the following :** **12**
- a) State the modern features of ring frame.
  - b) Explain end breakages in the ring frame with its causes and remedial actions.
  - c) Differentiate between manual doffing and automatic doffing with their merits and demerits.
- 6. Attempt any TWO of the following :** **12**
- a) Describe the passage of material through ring frame machine with neat sketch.
  - b) “Automation in not possible on Ring frame machine” Justify your answer.
  - c) If a ring frame producing 40<sup>s</sup> count has a front roller delivery rate 500"/min, find the production per spindle - shift at 90% efficiency. If the machine has 360 spindles also find the production per machine per shift and the hands produced in a shift.
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