

# 315394

**12526**

**3 Hours / 70 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 FIVE of the following :** **10**
- a) Explain the open end principle with suitable diagram.
  - b) List the limitations of ring spinning system.
  - c) List the modern features of air jet spinning.
  - d) List the applications of air-vortex spun yarn.
  - e) Define degree of mixing.
  - f) List any four yarn texturizing methods.
  - g) Explain the false twist texturizing principle.

P.T.O.

2. Attempt any THREE of the following : 12
- a) Illustrate the construction of rotor with suitable sketch.
  - b) Explain principle of friction spinning with neat labelled diagram.
  - c) Explain acclimatization of fibers.
  - d) Give the classification of fancy yarns.
3. Attempt any THREE of the following : 12
- a) Draw neat labelled diagram for DREF-III spinning.
  - b) Describe in details sliver blending.
  - c) Explain the principle of slub yarn manufacturing.
  - d) Give the classification of textured yarn.
4. Attempt any THREE of the following : 12
- a) Compare the rotor yarn and ring yarn with respect to, raw material, yarn structure, yarn properties, twist and price of yarn.
  - b) Illustrate with suitable sketch the structure of air-jet spun yarn.
  - c) Suggest the changes to be made at carding for processing of polyester - cotton blend material.
  - d) Illustrate with suitable diagram principle of yarn twisting in two for one twister (TFO).
  - e) Explain the principle of air-jet texturizing machine.

**5. Attempt any TWO of the following :****12**

- a) Calculate production of rotor spinning in kgs per shift per machine from following data,  
Rotor speed = 1,20,000 rpm,  
Yarn Count = 12 Ne,  
Twist per inch = 16,  
Number of spinning heads = 120 per m/c.  
Efficiency = 90%
- b) Explain the influence of process parameters on properties of air-jet spun yarn.
- c) Explain the causes for any three faults in blended yarn.

**6. Attempt any TWO of the following :****12**

- a) Explain the modern features of rotor spinning machine.
- b) Explain the process flow and sequence for production of melange yarn.
- c) Illustrate with suitable diagram edge crimping texturizing.
-