

315396

12526

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) 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) List the fiber parameters tested in AFIS.
 - b) Suggest the norms for yarn realisation and wastes for 60 Ne combed yarn.
 - c) List the key variables for process control in spinning.
 - d) Give the cost break down in a typical textile mill.
 - e) List the causes of drafting wave in draw frame.
 - f) State the importance of good lap for comber.
 - g) List the methods used to assess loom performance.

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2. Attempt any THREE of the following : 12
- a) Explain the scope of process control in spinning.
 - b) Explain the role of autoleveler in process control at draw frame.
 - c) Describe the factors affecting loom efficiency.
 - d) Explain the importance of stretch control at speed frame.
3. Attempt any THREE of the following : 12
- a) Explain scope and approach of process control in warping.
 - b) Describe the testing of size paste for process control in sizing.
 - c) Calculate the penalty points for 1500 meters of shirting fabric of 63 inches from following defects with four point inspection system,
 - 09 defects upto 3 inches,
 - 12 defects from 3 to 6 inches,
 - 03 defects from 6 to 9 inches,
 - 03 defects from 9 inches and above
 - 02 Holes of upto 3 sq. inches area
 - 02 Holes of above 3 sq. inches area.
 - d) Describe the various factors affecting to between bobbin count variation at ring frame.
4. Attempt any THREE of the following : 12
- a) Calculate the cleaning efficiency of blowroom and carding department from following data,
 - Trash% in Bale cotton = 6%
 - Trash% in Blowroom output = 3.6%
 - Trash% in Carding Sliver = 1.1%
 - b) Calculate the combing efficiency of comber from following data,
 - i) 50% span length of comber sliver = 29 mm
 - ii) 50% span length of comber lap = 24 mm
 - iii) Noil percentage of comber = 18%
 - iv) Sliver Hank = 0.12
 - v) Lap weight = 90 grams per meter.

- c) Discuss the factors affecting on yarn strength with respect to fiber used, machine condition and working parameters at ring frame.
- d) Explain causes and remedies for any three winding defects.
- e) Describe the snap technique to assess the loom performance.

5. Attempt any TWO of the following : 12

- a) Describe in details the linear programming technique for optimizing cotton mixing.
- b) Explain the effect of comber preparatory process on performance of comber.
- c) Describe in details the method to measure the yarn realisation.

6. Attempt any TWO of the following : 12

- a) Explain the concept of optimum loom allocation and maximizing operative efficiency in loom shed.
 - b) Suggest the measures to take at sizing for stretch control.
 - c) Explain the causes of low productivity in beam warping.
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