



SE-7505

**B. E. - IV (Sem - VII) (Textile Technology)
Examination**

May / June - 2011

Process Control in Spinning

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दृशावेव निशानीवाणी विगतो उत्तरवडी पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. E. - IV (Sem - VII) (T.T.)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Process Control in Spinning"/>	<input type="text"/>
Subject Code No. : <input type="text" value="7"/> <input type="text" value="5"/> <input type="text" value="0"/> <input type="text" value="5"/>	Section No. (1, 2,...): <input type="text" value="1"/> <input type="text" value="2"/>
Student's Signature	

- (2) Answers to the two sections must be written in separate answer books.
- (3) Figure to the right indicate full marks.
- (4) Tie two sections separately.

SECTION - I

- 1 (a) Do as directed :
- (i) The object of spinning department is to produced the yarn of required quality, in required quantity at minimum _____ 1
- (ii) Instrumental evaluation helps in selection of cotton at the time of mixing. (State True or False). 1
- (iii) Remedial action taken to improve performance of the yarn can be of short term or long term. (State Ture or False). 1
- (iv) Write multiple linear regression equation which enables assessment of mixing in terms of lea strength. 2
- (b) Explain simultaneous control of mixing quality and cost with the use of graphical method. 8
- (c) Discuss various "Technological considerations" involved in control of comber waste. 7

- 2 (a) Explain all the records for Estimating Yarn Realisation and waste. 10
 (b) Explain ring data system in modern spinning. 5

OR

- 2 (a) Describe with diagram any instrument used for machinery audit. 7
 (b) Explain determination of trash content and cleaning efficiency in Blow-Room. 8
- 3 Write short notes on : (any three) 15
 (i) Key variables for process control
 (ii) Optimization of waste at card
 (iii) ATIRA approach to L.P. (Linear programming)
 (iv) Collection, Interpretation & Corrective action for Process Control.

SECTION - II

- 4 (a) Answer the following :
- (i) If thick and thin places are nearly equal in the yarn, what can be the probable reason ? If thick places are in excess to thin place what can be the reason ? 2
- (ii) If 60s Ne has 200 gms breaking strength, calculate its Rkm value. 2
- (iii) Only mention avoidable causes of loss in efficiency at Ring frame. 2
- (iv) C.V.% of within lap should not exceed _____ whereas C.V.% of between lap should not be higher than _____. 2
- (v) Blow room has no direct effect on within bobbin count variation. True or False. 1
- (vi) _____ is used to measure nip load at drafting system. 1
- (b) If PI of mill is 78, calculate MPI of Ring frame section from following data if LER of the mill is 110: 10
- | Department | MPI |
|-------------|------|
| Speed Frame | - 84 |
| Draw Frame | - 70 |
| Carding | - 79 |
| Blow Room | - 66 |
- (Assume other suitable data as required.)

- 5 (a) Discuss various factors that affect strength of yarn. 10
(b) Discuss Random component of yarn irregularity briefly. 5

OR

- 5 (a) Classify the end breaks at Ring frame and discuss the factors affecting end breaks at Ring frame briefly. 10
(b) Discuss the effect of various spinning process on nep generation briefly. 5
- 6 Write short notes : (any **three**) 15
(i) Within bobbin count variation.
(ii) Yarn faults.
(iii) Factors affecting yarn evenness.
(iv) Relation between productivity and profitability of mill.
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