

BT-7/D-19 37093
PROCESS CONTROL m SPINNING
TT-425

Unit 11

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt Five questions in all, selecting at least one question from each Unit. All questions carry equal marks.

Unit I

1. (a) .Discuss in brief the following terms pertaining to cotton fibre quality and their instrumental evaluation process .
 - (i) Trash%
 - (ii) Fibre strength (at zero mm gauge length). 10
- (b) Discuss the factors which affect the cleaning efficiency of a blow room line. 10
2. (a) Why is it necessary to optimize the noil exfraction percentage in combing ? Discuss the factors which affect the oil percentage in combing. 10

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- (b) . Discuss in brief mechanism of controlling the following type of contamination from cotton .
 - (i) Heavy particle
 - (ii) Foreign fibre. 10

3. (a) Discuss the causes of periodic mass variation in a drafted strand. How do you characterize the periodic variation and trace the origin of periodic variation ?

10

- (b) What do you mean by B(L) and V(L) curve ? What are the important characteristics of B(L) and V(L)

10

4. (a)What are the possible reason of periodic irregularity in draw frame ? How do you control the same ? 10
- (b) Discuss the following terms .
 - (ii)Average value factor
 - (iii) Wavelength of periodic fault
 - (iv) Harmonics http://www.kuonline.in
 - (v) Amplitude (and periodic irregularity) in fibre strand and their origin. 10

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Unit 111

5. (a) Discuss the working of a evenness tester ? How does it detect presence of thick place, thin place and nep ? 10
- (b) Discuss the reason for formation of nep at various stages of process with special reference to the role of fibre material, process parameters and machine condition. 10
6. (a) What do you mean by count CV ? How do you reduce the same ? 10
- (b) Discuss the role of twist in imparting strength of yarn. How does the strength of yarn vary with twist in the yarn ? 10

Unit IV

7. (a) What do you mean by yarn realization ? Determine the approximate yarn realization in the following

cases :

- (i) Carded cotton yarn spun from fibre having frash %5
- (ii) Combed cotton yarn spun from fibre having trash % 4.5 and comber noil $^{\circ}/018$

(Assume necessary data wherever required).

- 10 (b) Discuss the process of controlling waste in comber. 10

8. (a) Discuss the terms degree of cleaning and cleaning efficiency. How do you control waste in blow room and carding ? 10
- (b) What do you mean by over and under correction of autoleveller ? 10