

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII • EXAMINATION – SUMMER 2013**

**Subject Code: 172904****Date: 28-05-2013****Subject Name: Process and Quality Control in Spinning****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**Q.1 (a)** Define:- Yarn Realization. Describe, 'How stock-in process' is accounted in assessing yarn realization. **07**

**(b)** Explain, ' How mixing quality is controlled through fibre characteristics'. **07**

**Q.2 (a)** Describe briefly the process for assessing cleaning efficiency of Blow Room . **07**

**(b)** Discuss briefly : **07**  
1.) Rkm value  
2) Relationship between single Yarn strength and Lea strength

**OR**

**(b)** State unavoidable causes of loss in efficiency at Ring Frame and discuss briefly how they can be controlled. **07**

**Q.3 (a)** Describe Periodic and Quasi Periodic Irregularity which affect evenness of yarn. **07**

**(b)** Explain briefly various Indices of Productivity for assessing performance of spinning mill. **07**  
Hence discuss the relationship between Productivity and profitability of the mill.

**OR**

**Q.3 (a)** Discuss the influence of Draw Frame and Speed frame process on Within Bobbin Count Variation. **07**

**(b)** State briefly various type of Yarn faults and factors affecting it. **07**

**Q.4 (a)** Write a short note on Classimat faults. **07**

**(b)** Enlist the stages of quality control. Explain significance of norm. **07**  
Describe the methods of establishing norms/standards, in process control in spinning.

**OR**

- Q.4** (a) What is importance of controlling comber waste? Discuss influence of method of lap preparation in detail. **07**
- (b) How card waste can be optimized ? write the formula to calculate cleaning efficiency of card. **07**
- Q.5** (a) Explain the terms; HVI and AFIS. How they are helpful in bale management. Hence explain concept of bale management. **07**
- (b) Explain following:- **07**
- i. advantages and limitation of instrumental evaluation.
  - ii. Fractionating efficiency of comber

**OR**

- Q.5** (a) Explain modern process control in spinning with specific reference to ring spinning. **07**
- (b) What is Machinery Audit ? with neat diagram explain any one instrument used in machinery audit. **07**

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