

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VII EXAMINATION – SUMMER 2016****Subject Code:172904****Date:10/05/2016****Subject Name:Process & Quality Control in Spinning****Time:02:30 PM to 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) Explain control of mixing quality using small sample spinning technique and multiple linear regression equation. **07**  
 (b) Discuss in detail why and how comber waste is controlled. **07**
- Q.2** (a) Define the terms Quality & Control. **07**  
 Draw a chart for role and scope of process control in spinning.  
 (b) Describe briefly machinery audit and its importance. **07**  
 Hence describe roller eccentricity tester briefly.
- OR**
- (b) Explain in brief performance assessment of card. **07**
- Q.3** (a) Explain in brief modern process control in spinning. **10**  
 (b) Explain how stock in process is adjusted for the calculation of yarn realization. **04**
- OR**
- Q.3** (a) Explain all nine possible situations when blow room cleaning efficiency and collected waste is compared with their respective norms. **09**  
 (b) Explain briefly the concept of hypothetical mill. Also discuss how this concept is employed to evaluate productivity index of mill. **05**
- Q.4** (a) Discuss influence of Draw frame and Speed frame on within bobbin count variation. **07**  
 (b) Discuss random component of yarn irregularity in detail. **07**
- OR**
- Q.4** (a) Discuss various factors that affect nep generation during spinning. **07**  
 (b) Classify the end breaks at Ring frame giving examples in each category. **07**  
 Also discuss briefly important steps to control end breaks.
- Q.5** (a) Discuss remedial measures for controlling loss in efficiency due to following causes in ring frame department of a spinning mill : **09**  
 (i) Waiting for doffing (ii) Waiting for empty bobbins (iii) Idle spindles  
 (b) Discuss relationship between single yarn strength and lea strength briefly with graph and regression equations. **05**
- OR**
- Q.5** (a) Discuss in detail influence of raw material and machines in spinning line on Yarn unevenness. **08**  
 (b) Discuss briefly the problem of : **06**  
 (i) Slubs (ii) Slough off

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