

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 172904

Date: 04/05/2017

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) Define : Quality and control. State the objectives of process control in spinning. **07**
(b) Discuss the methods of controlling mixing quality through fiber characteristics. **07**
- Q.2** (a) Explain importance and procedure of Bale management. **07**
(b) Give brief note on optimizing cleaning and waste at card. **07**
OR
(b) Explain the procedure for control of comber waste. **07**
- Q.3** (a) Explain how Ring data system is useful in modern process control in spinning. **07**
(b) Discuss briefly causes of generation of thick and thin places in yarn. **07**
Also state the method to measure them.
OR
- Q.3** (a) Explain with the help of chart records to account for yarn Realisation. **07**
(b) Explain with neat sketch ATIRA Nilometer for measuring nip load on draw-frame for machinery audit. **07**
- Q.4** (a) Discuss briefly remedial measures to control loss in efficiency due following reasons at ring frame: **09**
(i) Waiting for doffing
(ii) Waiting for empty bobbins
(iii) Back stuff shortage.
(b) What are idle spindles ? **05**
Discuss briefly how the problem of idle spindles can be controlled.
OR
- Q.4** (a) Discuss Random and Periodic component of yarn irregularity briefly. **10**
(b) Explain the term Rkm value and how it can be calculated. **04**
- Q.5** (a) Discuss the various factors that affect yarn unevenness. **08**
(b) State the various Indices of productivity used to analyze performance of mill. **06**
Also write the equations to calculate them.
OR
- Q.5** (a) Discuss various factors that affect Within bobbin count variation . **08**
(b) Write Short notes on **06**
(i) Yarn Grading (ii) Classimat System
