

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME - SEMESTER- I • EXAMINATION – WINTER 2014**

**Subject Code:** 2712502**Date:** 09/01/ 2015**Subject Name:** Theory and Design of Textile Machine I**Time:** 02:30 p.m. to 05:00 p.m.**Total Marks:** 70**Instructions:**

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

- Q.1** Define: bale management, EFS and SCI. How the EFS system optimized purchasing, ware house management and bale lay down selection solution through the use of HVI data? **14**
- Q.2** (a) List out the rotor machine design modifications to improve yarn quality and production. **07**  
(b) How modern comber give better fibre selectivity with optimum noil% ? **07**  
**OR**  
(b) On based of hook theory with sketch explain the number of machines requirement from card to comber and ring frame. **07**
- Q.3** (a) Explain major changes in card cylinder wires and impact of these changes on cylinder loading, trash extraction and yarn quality. **07**  
(b) Why autoleveller is must on high production card? Explain different types of it. **07**  
**OR**
- Q.3** (a) Write a note on high production card wire clothing manufacturing. **07**  
(b) Explain the effect of extra carding segments on cleanliness, nep level and short fibre. **07**
- Q.4** What are the main objects of zone II machine? Explain working of any two modern machine of this zone. **14**  
**OR**
- Q.4** Why did traditional blow room opening line fail in contributing positively to yarn quality? **14**
- Q.5** (a) Explain the design changes in roller drafting arrangement in short staple spinning. **07**  
(b) Discuss design developments in ring and traveler at ring frame. **07**  
**OR**
- Q.5** (a) Specify features of modern flyer with examples and sketches. **07**  
(b) Compare the spinning geometry of condensed spinning system with conventional ring frame. Which design changes are done on ring frame for condensed spinning system? **07**

\*\*\*\*\*