

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – SUMMER • 2014****Subject Code: 132803****Date: 28-05-2014****Subject Name: Scouring and Bleaching - I****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)** Give reasons: **10**
- i. Air vent valve is kept open before the full pressure is developed in kier
 - ii. Always vat dye is preferred for coloured woven fabrics
 - iii. In m/c chemicking, pits are always arranged in pairs.
 - iv. Chemicking should not be carried out at neutral pH
 - v. Gas singeing unit is always installed away from other departments of processing
- (b)** Describe with neat diagram the working of tight rope washing machine **04**
- Q.2 (a)** What is difference between chemical bleaching agent and physical bleaching agent? **07**
Explain the whitening of textiles obtained by bluing and optical brightening agents.
- (b)** Enlist its characteristic features fluorescent brightening agents **07**
- OR**
- (b)** Give a critical review on bleaching of cotton fabric with hydrogen peroxide. **07**
- Q.3 (a)** Give a critical review on hydrogen peroxide bleaching. **07**
- (b)** Enlist various oxidative desizing methods. Discuss any one in detail. **07**
- OR**
- Q.3** Describe in detail various techno-chemical aspects of enzymatic desizing process. **14**
- Q.4 (a)** Describe the functions and working of shearing and cropping machine. **07**
- (b)** State detailed description of most popular method of singeing. **07**
- OR**
- Q.4** Enumerate different types of continuous bleaching ranges. Describe with neat diagram the working of any one open width bleaching range. **14**
- Q.5 (a)** Differentiate between scouring and souring. Explain the souring process in detail **07**
- (b)** Correlate the effect of pH on sodium hypochlorite bleaching process in context to the stability. **07**
- OR**
- Q.5** Describe in detail various types of natural impurities present in cotton fibres. **14**
