

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER 2013****Subject Code: 132904****Date: 30-11-2013****Subject Name: Textile Processing - 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) What is singeing? Discuss the need of singeing process. Describe in detail the process of gas singeing. **07**
- (b) Explain why desizing is necessary. Enlist various desizing processes. Describe the process of desizing which is the most commonly used today in industries with its pros and cons. **07**
- Q.2** (a) Discuss the need of scouring treatment with the principle phenomenons involved in it. **07**
- (b) Describe the process of scouring cotton fabrics using pressure kier method. **07**
- OR**
- (b) Justify the significance of J-box in scouring of cellulosics and their blends with the help of proper sketch and process sequence and parameters. **07**
- Q.3** (a) Describe the method of bleaching cotton fabrics using Sodium hypochlorite with its advantages and disadvantages. **07**
- (b) Describe the process of bleaching of cotton fabrics using hydrogen peroxide including batch as well as continuous process. **07**
- OR**
- Q.3** (a) Explain the classification of coloring matter. Show suitability of each class of color for coloration of various types of fibers. **07**
- (b) What does the name Direct Dyes indicate? Describe the process of dyeing cotton with direct dyes with its advantages and disadvantages. **07**
- Q.4** (a) Discuss, with sketch and principle, jigger dyeing machines with its positive and negative aspects. **07**
- (b) What is meant by name Reactive dyes? Give the types of reactive dyes. Describe the process of dyeing cotton with any one class of reactive dyes. **07**
- OR**
- Q.4** (a) With chemical reactions involved, describe the process of dyeing cellulosics with vat dyes. **07**
- (b) Discuss, yarn dyeing machines with sketch, process parameters and the precautionary measures. **07**
- Q.5** (a) Discuss the engineering and technological aspects of various types of padding mangles. **07**
- (b) Describe the process of carrier dyeing of polyester fabrics with its advantages and disadvantages. **07**
- OR**
- Q.5** (a) What is HTHP dyeing method for polyester? Describe the process of dyeing polyester fabrics in Jet Dyeing machines. **07**
- (b) Write a note on, Dyeing of Polyester/ Cotton blend. **07**
