

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER– III EXAMINATION – SUMMER 2015**

Subject code: 132904

Date: 29/05/2015

Sub. Name: Textile Processing-I

Time: 02.30pm-05.00pm

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) Enlist various processes in wet processing of fabrics. Justify the need for pre-treatment of fabrics. **06**
- (b) What is singeing? Enlist various methods for singeing of fabrics. Describe in detail, the most commonly used method of singeing with necessary sketch and the influencing parameters. **08**
- Q.2** (a) What is desizing and why it is necessary? Describe method of enzymatic desizing with its merits and demerits. **07**
- (b) Give the classification of desizing methods. Discuss the points of differences of various methods of desizing. **07**
- OR**
- (b) Describe the process of desizing of cotton fabric with hypochlorite with its merits and demerits. **07**
- Q.3** (a) Explain the terms: Saponification, Emulsification, Wetting and Detergency in context to scouring. **08**
- (b) With neat sketch, describe the process of scouring cotton fabric in pressure kier. **06**
- OR**
- Q.3** (a) What is mercerization of cotton and why it is necessary in cotton processing? Describe any one method of fabric mercerization. **07**
- (b) Give the objectives of bleaching. Enlist various bleaching agents. Discuss any one method for bleaching of cotton fabric with its merits and demerits. **07**
- Q.4** (a) What is dyeing? Elaborately explain the classification of coloring matter. **07**
- (b) Explain in detail, the chemistry of direct dyes its and application on cotton fabric. **07**
- OR**
- Q.4** (a) Classify vat dyes and explain its chemistry and application on cotton fabric. **07**
- (b) Explain the principle, construction and working of jigger dyeing machine. **07**
- Q.5** (a) What is meant by cold brand and hot brand reactive dyes? Describe the process of dyeing cotton fabric with cold brand reactive dyes. **07**
- (b) Describe the process of dyeing sulphur black on cotton fabric. **07**
- OR**
- Q.5** (a) Elaborately discuss the process of producing azoic colours on cotton fabric with the chemical reactions involved. **08**
- (b) Describe the process of dyeing P/C blend with Disperse/reactive system. **06**

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