

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER– III (NEW) EXAMINATION – SUMMER 2015**  
**Subject code: 2132904** **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) Define singeing. Give the objectives of singeing process. Elaborately discuss gas singeing process with schematic diagram, merits and demerits. **09**
- (b) Discuss the objectives of desizing process. Give the detail classification of desizing processes. **05**
- Q.2** (a) Describe the most versatile method of desizing with its merits and demerits. **07**
- (b) What is scouring? Enlist various methods of scouring cotton fabric and discuss any one in detail. **07**
- OR**
- (b) Describe the process of “Alkaline boil off” for cotton fabric. **07**
- Q.3** (a) Explain the terms: Saponification, Emulsification, Wetting and Detergency in context to scouring. **08**
- (b) What is mercerization? Discuss the changes taking place in cotton fiber after mercerization. **06**
- OR**
- Q.3** (a) Enlist various methods of mercerization. Discuss any one method for fabric mercerization with merits and demerits. **07**
- (b) What is bleaching and why it is needed in textile processing? Describe in detail the process of peroxide bleaching of cotton fabrics. **07**
- Q.4** (a) Describe the process of hypochlorite bleaching of cotton fabric with its merits and demerits. **07**
- (b) Elaborately discuss the process of dyeing cotton with direct dyes. Name the treatments used to improve the washing fastness of direct dyeings. **07**
- OR**
- Q.4** (a) What is meant by reactive dyes? Classify reactive dyes. Describe process of dyeing cotton fabric with any one class of reactive dyes. **08**
- (b) What are the merits of Vat dyes? Classify vat dyes. Show principle of dyeing vat dyes with chemical reaction. **06**
- Q.5** (a) Describe the process of dyeing wool with acid dyes. **07**
- (b) Name the classes of dyes which can be used for dyeing of silk fiber. Describe process of dyeing silk fabric with dyes most commonly used for it. **07**
- OR**
- Q.5** (a) Explain the principle and process of producing azoic colours on cotton fabric. **08**
- (b) Describe two bath method for dyeing P/C blend. **06**

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