

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE SEM-III Examination May 2012****Subject code: 132904****Subject Name: Textile Processing - I****Date: 10/05/2012****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) Answer the following **Objective** questions: **07**
- i. Name any two water soluble dyes.
  - ii. State the object of desizing.
  - iii. \_\_\_\_\_ invented the phenomenon of mercerization.
  - iv. Enlist the methods to carry out degumming of silk.
  - v. Water is the main ingredient in \_\_\_\_\_ method to carry out desizing of cotton textiles.
  - vi. Emulsion scouring of woollen textiles is also known as \_\_\_\_\_.
  - vii. Direct dyes show poorest result towards \_\_\_\_\_ agency.
- (b) Answer the following **Objective** questions: **07**
- i. Enlist the name of machines used for scouring process.
  - ii. What is the purpose of scouring?
  - iii. Write down the object of grey fabric inspection.
  - iv. The main ingredient used for scouring of cotton textiles is \_\_\_\_\_.
  - v. The plates of plate singeing machine is generally made up of \_\_\_\_\_.
  - vi. The machine for shearing and cropping works on the principle of \_\_\_\_\_.
  - vii. What is the active bleaching entity in sodium hypochlorite bleaching?
- Q.2** (a) Discuss in brief about silk fibre. Derive the parameters to carry out degumming of silk fabric. Explain any two methods of it in detail. **07**
- (b) State the list of bleaching agents. Discuss Hydrogen peroxide bleaching with suitable techno-chemical parameters involved. **07**
- OR**
- (b) Explain mercerization process in detail. **07**
- Q.3** (a) Explain in brief about Direct dyes. Elaborate its classes, properties and application on cotton textiles with dyeing mechanism involved. **07**
- (b) Enlist the methods to carry out desizing of cotton fabric. Explain all the methods of Oxidative desizing with techno-chemical parameters involved. **07**
- OR**
- Q.3** (a) Give brief description on wool. Enumerate the need to carry out bleaching of wool by possible means. Elaborate reduction bleaching techniques in detail. **07**
- (b) Discuss the most popular and most effective method of desizing of cotton fabrics involving suitable parameters and mechanism. **07**
- Q.4** (a) Explain Pressure Kier scouring machine with neat sketch. **07**
- (b) Discuss Sodium hypochlorite bleaching including its process parameters. **07**
- OR**
- Q.4** (a) Explain scouring process involving uses of each ingredient. **07**

- (b) Discuss singeing involving significance and machines available for it. Explain Gas singeing machine with neat sketch. **07**
- Q.5** (a) Explain the following terminologies in context to dyeing textiles: **07**
- i. Dye-bath
  - ii. M.L.R.
  - iii. Percentage shade
  - iv. Level dyeing
  - v. Exhaustion
  - vi. Dye
  - vii. Uneven dyeing
- (b) Write a short note on “Grey Inspection” and “Shearing and Cropping” **07**
- OR**
- Q.5** (a) Enumerate various impurities present in wool. Enlist the methods to remove them. Explain any two methods in detail. **07**
- (b) Explain in brief about Reactive dyes. Elaborate its classes, properties and application on cotton textiles with dyeing mechanism involved. **07**

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