

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014**

**Subject Code: 162802****Date: 21-05-2014****Subject Name: Analytical Textile Chemistry- II****Time: 10:30 am - 01:00 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. Expand R.I.M.I. to its full form.
  - ii. State the properties of degraded cellulose.
  - iii. Non-volatile content of substance gives idea about its purity. True/False. Justify the answer.
  - iv. Show microscopic appearance of rice starch.
  - v. Name the main ingredient used to find saponification value.
  - vi. What does a pocket refractometer used for?
  - vii. Thymol blue in presence of HCl gives \_\_\_\_\_ colouration with anionic surfactant.
- (b)** What are carriers used for? Describe various methods to evaluate carriers and illustrate few names of it. **07**
- Q.2 (a)** Answer the following OBJECTIVE questions: **07**
- i. \_\_\_\_\_ reagent is used to determine % purity of hydro.
  - ii. Define Molar extinction co-efficient.
  - iii. The main ingredient used for determination of phosphorous content is \_\_\_\_\_.
  - iv. Differentiate between active content and non-volatile content of any substance.
  - v. \_\_\_\_\_ instrument is widely used to measure strength of dyes.
  - vi. PVA produces \_\_\_\_\_ colour in the solution of Borax and Iodine.
  - vii. Enlist any two sequestering agents.
- (b)** Illustrate few printing thickeners. Explain various general test methods to evaluate them. **07**
- OR**
- (b)** Explain the test method to evaluate phosphorous content of finished textile with its significance and principle involved. **07**
- Q.3 (a)** Explain the process to determine carboxyl content of oxycellulose with significance, principle and chemical reactions involved. **07**
- (b)** State the main function of mild oxidizing agent with few examples. Describe its evaluation method with principle involved. **07**
- OR**
- Q.3** Discuss the following analytical methods in context to starch: **14**
- a) Colour   b) Fineness   c) Purity   d) Cold Soluble Matter
- Q.4** Describe the methods for evaluation of leveling agents used for cotton as well as for synthetics. **14**
- OR**
- Q.4** Enumerate various test methods for complete analysis of sizing softeners. **14**
- Q.5 (a)** Explain the method for determination of copper number in depth. **07**
- (b)** Elucidate the method for quantitative evaluation of Sodium alginate. **07**
- OR**
- Q.5 (a)** Give the complete quantitative and qualitative analysis of Polyethylene emulsions. **07**
- (b)** Enumerate various methods to determine dye strength. Discuss any one in detail. **07**

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