

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014****Subject Code: 163608****Date: 28-05-2014****Subject Name: Principles of Dyeing and Printing****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)** Why is pretreatment of fabric needed? Draw a flow sheet of fabric dyeing. **07**
- (b)** How is printing different from dyeing? Describe different methods of printing. **07**
- Q.2 (a)** Write a note on jigger and padding mangle **07**
- (b)** Give the structure of wool and silk. Explain different bonding in wool fibre and their importance. **07**
- OR**
- (b)** Describe various material of constructions used for vessels and their compatibility with dyes. **07**
- Q.3 (a)** (i) Classify vat dyes and explain principle and process of vat dyeing. **04**
(ii) Draw the structure of cotton fibre and draw the flow chart of pretreatment of cotton. **03**
- (b)** (i) Describe hank dyeing. **04**
(ii) Explain the role of humectants and reducing agents in printing paste? **03**
- OR**
- Q.3 (a)** (i) What is Kier boiling? Write a note on affinity and substantivity. **04**
(ii) Explain Zwitter ion, Keratinisation, Mordant dyeing **03**
- (b)** (i) Explain the concept of yarn, cheese, hank and cop **04**
(ii) Write a note on Physicochemical equilibrium of dyeing **03**
- Q.4 (a)** What are the different types of machinery available for loose cotton dyeing? **07**
- (b)** What are the different types of hank dyeing available? **07**
- OR**
- Q.4 (a)** What are the advantages of cheese and cop dyeing along with difference between the two? **07**
- (b)** What are the various components present in printing paste and their role in printing **07**
- Q.5 (a)** Describe roller printing in detail. **07**
- (b)** (i) Explain the properties of printing as a coloration technique. **07**
(ii) Write a note on Rope dyeing and jet dyeing
- OR**
- Q.5 (a)** (i) Describe block printing **04**
(ii) Explain discharge printing **03**
- (b)** (i) Write a note on tie and dye method. **04**
(ii) Describe various methods of coloring fabrics ? **03**
