

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – SUMMER 2013****Subject Code: 152805****Date: 23-05-2013****Subject Name: Production and Applications of Colorants and Auxiliaries****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) Give the definition of colour. Discuss Wittös theory in detail. **07**
(b) Explain Dow and Cumene process in detail with chemical reactions. **07**

- Q.2** (a) What is Oxidation? Explain in detail with suitable examples. **07**
(b) Explain Bechamp Reduction in detail with necessary chemical reaction. **07**

OR

- (b) Describe Coal-tar distillation process with neat diagram. **07**

- Q.3** (a) Discuss non-textile uses of the dye stuff in detail. **07**
(b) Explain theory of surface active agent. **07**

OR

- Q.3** (a) Give detail classification of surface active agents in detail. **07**
(b) Discuss about leveling agents & Dye fixing agents in detail. **07**

- Q.4** (a) Define anionic surfactants. Discuss carboxylic acid base anionic surfactants in detail. **07**
(b) Define cationic surfactants. Discuss in detail about fatty amines. **07**

OR

- Q.4** (a) Define non-ionic surfactants. Discuss in detail about ester linkage to solubilising group. **07**

- Q.4** (b) Define cationic surfactants. Discuss any one group of cationic surfactants in detail. **07**

- Q.5** (a) Discuss Sequestering agent & Anti foaming agents. **07**
(b) Explain Wetting agents and dispersing agents. **07**

OR

- Q.5** (a) Discuss in detail about hygroscopic agents and Oxidizing & Reducing agents. **07**

- (b) Discuss about Carriers and discharging agents. **07**
