

GUJARAT TECHNOLOGICAL UNIVERSITY**BE – SEMESTER V • EXAMINATION – WINTER - 2012****Subject code: 152805****Date: 23-01-2013****Subject Name: Production and Applications of Colorants and Auxiliaries****Time: 02:30 pm to 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) Describe Coal-tar distillation process with neat diagram. **07**
(b) Give manufacturing of H-acid & J-acid with chemical reactions. **07**
- Q.2** (a) What is Oxidation? Explain in detail with suitable examples. **07**
(b) Give the definition of color. Discuss Witt's theory in detail. **07**
OR
(b) What is chlorination? Explain in detail with suitable examples. **07**
- Q.3** (a) Discuss non-textile uses of the dye stuff in detail. **07**
(b) Discuss about Leveling agents & Dispersing agent. **07**
OR
- Q.3** (a) Explain Bechamp Reduction in detail with necessary chemical reaction. **07**
(b) Explain role of Carriers in dyeing and role of discharging agents in printing. **07**
- Q.4** (a) Explain theory of surface activity and role of surfactants. **07**
(b) Define cationic surfactant. Discuss in detail any one class with suitable example. **07**
OR
- Q.4** (a) Discuss in detail about dye fixing agent & Anti foaming agents with mechanism of their functioning. **07**
Q.4 (b) Justify the need of buffers and sequestering agents in textile wet processing with examples. **07**
- Q.5** (a) Discuss in detail about Oxidizing & Reducing agents. **07**
(b) Discuss the concept of HLB and its significance in Textile wet processing. **07**
OR
- Q.5** (a) Define anionic surfactants. Discuss any one class of anionic surfactant in detail. **07**
(b) Define nonionic surfactants. Discuss any one class of anionic surfactant in detail. **07**
