

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – SUMMER • 2015****Subject Code: 152805****Date: 15-05-2015****Subject Name: Production and Application of Colorants and Auxiliaries****Time: 02.30 pm - 05.00 pm****Total Marks: 70**

- Q.1** (a) Describe Witt's theory in detail. **10**
(b) What are Primaries? Give examples of different Primaries. **04**
- Q.2** (a) Describe Dow and Cumene process in detail with chemical reactions. **07**
(b) Describe Nitration in detail with examples. **07**
- OR**
- (b) Describe coal tar distillation with neat sketch. **07**
- Q.3** (a) Explain Bachamp reduction with reactions. **07**
(b) Describe Oxidation in detail with examples. **07**
- OR**
- Q.3** (a) Give classification of surfactants. Enlist essential requirement of a surfactant. **07**
(b) Describe theory of surface activity with neat sketch. **07**
- Q.4** Discuss the chemistry, preparation, properties and applications of anionic surface active agents with examples. **14**
- OR**
- Q.4** Enlist different auxiliaries used in dyeing operation. Explain any three in detail. **14**
- Q.5** Write a short note on any TWO: **14**
- (a) Hygroscopic agents
(b) Oxidizing and reducing agents
(c) Buffers
(d) Discharging agents
