

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. V<sup>th</sup> Semester–Examination – Nov-Dec- 2011

Subject code: 152805

Subject Name: Production and Applications of Colorants and Auxiliaries

Date: 03/12/2011

Time: 02:30 pm – 05:30 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 Dow and cummene process in detail 07  
(b) Give manufacturing of H-acid & J-acid with chemical reactions. 07

- Q.2 (a) Describe Coal-tar distillation process with neat diagram. 07  
(b) What is Nitration? Explain in detail with suitable examples. 07

OR

- (b) What is Oxidation? Explain in detail with suitable examples. 07

- Q.3 (a) What is Sulphonation? Explain in detail with suitable examples. 07  
(b) Discuss about Dye fixing agents, Leveling agents. 07

OR

- Q.3 (a) Discuss Non-Textile uses of Dyes. 07  
(b) Explain Carriers and discharging agents. 07

- Q.4 (a) Give the manufacturing process for TRO with its application in textile processing. 07  
(b) Define Cationic surfactants. Discuss any one class of Cationic surfactant in detail. 07

OR

- Q.4 (a) Explain the phenomenon of wetting, detergency and emulsification with examples from textile processing. 07  
(b) Discuss in detail about buffers and sequestering agents with suitable examples. 07

- Q.5 (a) Discuss the advantageous properties of Non-ionic surfactants with its manufacturing process in brief. 07  
(b) Give the classification of textile auxiliaries. Explain the meaning of surfactant and its mode of action. 07

OR

- Q.5 (a) Define anionic surfactants. Discuss any one class of Anionic surfactant in detail. 07  
(b) Define nonionic surfactants. Explain Alcohol Ethoxylates and Nonyl phenol Ethoxylates. 07

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