

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER 2013****Subject Code: 133604****Date: 26-11-2013****Subject Name: Chemistry of Intermediates and Colorants - I****Time: 02.30 pm - 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) Write a note on synthesis of naphthol sulphonic acid. **07**
(b) Give the classification of dyes based on chromophores. **07**
- Q.2** (a) Give the synthesis of following compounds from diethyl malonate **07**
a. Barbituric acid
b. Acetoacetic acid
c. 2-methyl propanoic acid
d. Glycine
e. Propionic acid
(b) Write a note on synthesis of typical dyestuff intermediates based on toluene. **07**
- OR**
- (b) How will you synthesize following compounds from naphthalene? **07**
a. α -naphthol
b. β -naphthol
c. α -naphthyl amine
d. β -naphthyl amine
e. Anthranilic acid
- Q.3** (a) Write a note on synthesis of amino naphthol sulphonic acid. **07**
(b) How pyrimidine is synthesized? Describe its important reactions. **07**
- OR**
- Q.3** (a) Write a note on evolution of dyestuff chemistry. **07**
(b) Define the term dyeing. Explain the forces involved in dyeing process. **07**
- Q.4** (a) Give the synthesis of anthraquinone from phthalic acid with explanation. **07**
(b) Describe the synthesis of sulphonation, nitration and reduction of anthracene. **07**
- OR**
- Q.4** (a) Write a note on sulphonation of α -naphthyl amine **07**
(b) Give the synthesis of S-acid and Koch acid. **07**
- Q.5** (a) Write a note on coltar primaries. **07**
(b) Difference between dyes and pigments and give the true characteristic of dyes. **07**
- OR**
- Q.5** (a) Discuss hammet substitution constant. **07**
(b) Write a note on hawarth synthesis of anthracene **07**
