

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV • EXAMINATION – SUMMER • 2014****Subject Code: 143604****Date: 23-06-2014****Subject Name: Chemistry of Intermediates and Colorants - II****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) Explain modern theory of color and chemical constituents. **07**
(b) Define the term optical brighteners. Give the characteristic properties and classification of optical brighteners. **07**
- Q.2** (a) Explain molecular orbital theory. **07**
(b) Give the synthesis of Direct Orange 26 and Direct Red 31. **07**
- OR**
- (b) Give the classification of dyes based on chromophores. **07**
- Q.3** (a) Define the term monoazo dyes and give the synthesis of Acid Red 14 and Acid Red 29. **07**
(b) Define the term reactive dye? Give the classification of reactive dye. Give the synthesis of Procion Brilliant Red H-3B. **07**
- OR**
- Q.3** (a) Define the term azoic dyes. Give the synthesis of naphthol AS and Fast Orange GGD base. **07**
(b) Give the synthesis of Tinopal BV and 3-phenyl coumarin. **07**
- Q.4** (a) Give the synthesis of Rosaniline and Auramine G. **07**
(b) Define the term disperse dye. Give the classification of disperse dyes. Give the synthesis of Disperse Yellow 23. **07**
- OR**
- Q.4** (a) Explain diazotization and coupling reaction with mechanism. **07**
(b) Give the example of anthraquinone and nitrodipheylamine disperse dyes. **07**
- Q.5** (a) Explain different types of process for the synthesis of indigoid dyes. **07**
(b) Give the synthesis of Malachite Green and Crystal Violet. **07**
- OR**
- Q.5** (a) Explain various methods for the synthesis of Indanthrone Blue. **07**
(b) Give the synthesis of copper phthalocyanine from phthalonitrile and phthalic anhydride. **07**
