

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) - EXAMINATION – SUMMER 2017****Subject Code: 2143604****Date: 06/06/2017****Subject Name: Chemistry of Intermediates & Colorants-II (Department Elective-II)****Time: 10:30 AM to 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.

		MARKS
Q.1	Short Questions	14
	1 Give the structure of acetoacetanilide.	1
	2 What do you mean by solvent dye?	1
	3 Differentiate hot brand and cold brand reactive dye.	1
	4 Give the structure of N-Phenyl-J-acid.	1
	5 Give the structure of 1-Phenyl-3-chloro-5-pyrazolone and show its coupling position.	1
	6 Define the term hypso-chromic effect.	1
	7 What do you mean by diazotization?	1
	8 What do you mean by azoic dye?	1
	9 Define the term vat dye.	1
	10 Define the term optical brighteners.	1
	11 What do you mean by pigment?	1
	12 Define the term chromophore.	1
	13 Give the examples of electron donating and electron withdrawing groups.	1
	14 Give the structure of phenolphthalein.	1
Q.2	(a) Define the term reactive dye. Give the classification of reactive dyes.	03
	(b) Give classification of disperse dyes.	04
	(c) Give the synthesis of Direct Violet 51 and Direct Red 31.	07
	OR	
	(c) Give the various synthesis of Indanthrone Yellow 4 GK.	07
Q.3	(a) Give the synthesis of Disperse Yellow 23.	03
	(b) Give the synthesis of Malachite Green and Perarose-Aniline	04
	(c) Give the synthesis of Auramine G and Methyl Violet.	07
	OR	
Q.3	(a) Give the synthesis of Solway Ultrablue B.	03
	(b) Give the classification and characteristic properties of optical brighteners.	04
	(c) Give the synthesis of Naphthol AS and Fast Orange GGD base.	07
Q.4	(a) Give the synthesis of Acid Orange II and Acid Red 29.	03
	(b) Give the mechanism of diazotization.	04
	(c) Give the synthesis of Tinopal BV and 3-phenyl Coumarine.	07
	OR	
Q.4	(a) What do you mean by coupling reaction? Explain coupling rule with examples.	03
	(b) Give the synthesis of Caledone Jade Green with explanation.	04
	(c) Explain modern theory of color and chemical constituents.	07
Q.5	(a) Give the synthesis of Congo Red.	03

- (b) Give the synthesis of copper phthalocyanine from phthalonitrile and phthalic anhydride. **04**
- (c) Give the synthesis of Flavanthrone and Pyranthrone. **07**
- OR**
- Q.5** (a) Give the synthesis of Astrazone Pink FG. **03**
- (b) Give the two synthesis of preparation of Aurin. **04**
- (c) Explain Sandmayer's and Bayer process for the synthesis of indigoid dyes. **07**
