Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV(New) • EXAMINATION – WINTER 2016

Subject Code:2143604 Date:22/11/2016

Subject Name:Chemistry of Intermediates & Colorants-II

Time:02:30 PM to 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.**

			MARKS
Q.1		**Short Questions**	**14**
	1	Define the term optical brighteners.	1
	2	What do you mean by mordant dye?	1
	3	Differentiate hot brand and cold brand reactive dye.	1
	4	Give the structure of N-Methyl-J-acid.	1
	5	Give the structure of 1-Phenyl-3-chloro-5-pyrazolone and show its coupling position.	1
	6	Define the term hyper chromic effect.	1
	7	Define the term diazotization.	1
	8	What do you mean by azoic dye?	1
	9	Define the term vat dye.	1
	10	Give the structure of acetoacetanilide.	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 pyrazine.	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 synthesis of Congo Red and Acid Yellow 142.	**07**
Q.3	**(a)**	Explain coupling rule and coupling positions with examples.	**03**
	(b)	Give the synthesis of Caledone Jade Green with explanation.	**04**
	(c)	Explain chromophore auxochrome theory of color and chemical constituents.	**07**
Q.3	**(a)**	Give the synthesis of Methyl Orange and Acid Red I.	**03**
	(b)	Explain mechanism of diazotization.	**04**
	(c)	Give the synthesis of Blankophor R and 3-phenyl Coumarine.	**07**
Q.4	**(a)**	Give the synthesis of Disperse Yellow 7.	**03**
	(b)	Give the synthesis of Malachite Green and Rose-Aniline	**04**
	(c)	Give the synthesis of Auramine G and Methyl Violet.	**07**
		OR	
Q.4	**(a)**	Give the synthesis of Astrazone Red 6B.	**03**
	(b)	Give the classification and characteristic properties of optical brighteners.	**04**
	(c)	Give the synthesis of Fast Blue B base and Fast Orange GGD base.	**07**
Q.5	**(a)**	Give the synthesis of Astrazone Yellow 3G	**03**
	(b)	Give the synthesis of Alizarin Orange and Alizarin Blue.	**04**
	(c)	Explain Sandmayer's and Bayer process for the synthesis of indigoid dyes.	**07**

OR

Q.5	**(a)**	Give the synthesis of Acid Red 14.	**03**
	(b)	Give the synthesis of copper phthalocyanine from phthalonitrile and phthalic anhydride.	**04**
	(c)	Give the various synthesis of Indanthrone Yellow 4 GK.	**07**

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