Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER– V (New) EXAMINATION – WINTER 2019

Subject Code: 2153608 Date: 29/11/2019

Subject Name: Chemistry of Intermediates & Colorants-III

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	**(a)**	What do you mean by dispersion?	**03**
	(b)	Write a short note on: 1. Partition ratio 2. Vatting of dyes	**04**
	(c)	Give the difference between dyes & pigments with proper justification.	**07**
Q.2	**(a)**	What do you mean by FBAs?	**03**
	(b)	Discuss the importance of coumarine derivatives as FBAs.	**04**
	(c)	Explain the concept of Luminescence with Jablonski diagram with sketch.	**07**
		OR	
	(c)	Explain the detailed synthesis of any one optical brightener.	**07**
Q.3	**(a)**	What are disperse dyes? Give example of it.	**03**
	(b)	Justify: Azo dyes represent the largest group of disperse dyes.	**04**
	(c)	Draw the chemical structures of following monoazo disperse dyes: i) C.I. Disperse Orange 44 ii) C.I. Disperse Red 72 iii) C.I. Disperse Red 156	**07**
		OR	
Q.3	**(a)**	What are reactive dyes? Give their properties.	**03**
	(b)	Explain the synthesis of any one reactive systems with suitable chemical reaction.	**04**
	(c)	Draw the chemical structures of following diazo components reactive dyes: i) Sulphanilic Acid ii) Tobias Acid iii) Metanilic Acid iii) K Acid	**07**
Q.4	**(a)**	Explain the classification of reactive dyes on the basis of change in temperature.	**03**
	(b)	Explain the dyeing mechanism of reactive dyes.	**04**
	(c)	Discuss the variety of shades available in reactive dyes with various chromophoric systems?	**07**
		OR	
Q.4	**(a)**	Explain the phenomenon of surface tension in dyeing a fabric.	**03**
	(b)	Explain the important factors to be considered in selecting anthraquinone dyes?	**04**
	(c)	Discuss: The bathochromic shift increases with increasing basicity of the substituents in simple anthraquinone dyes.	**07**
Q.5	**(a)**	What are Sulphur Dyes? Give characteristics of them.	**03**
	(b)	Explain classification of Sulphur Dyes on the basis of its application?	**04**
	(c)	Discuss the steps involved in dyeing a sulphur dye on fabric.	**07**
		OR	
Q.5	**(a)**	What do you mean by paper dyes?	**03**
	(b)	Briefly explain Aniline leather dyes.	**04**
	(c)	Briefly explain the low molecular weight leather dyes with any two synthesis.	**07**

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