

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
