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GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III(New) EXAMINATION - SUMMER 2016

Subject Name: Chemistry of Intermediates & Colorants-I(Department

Date:27/05/2016

Subject Code:2133604

		ive-I)	-0
		:10:30 AM to 01:00 PM Total Marks	: 70
1	nstru	 Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 	MARKS
Q.1		Short Questions	14
Q. <u>1</u>	1	Define dyes	4-7
	2	Discuss about stripping	
	3	Draw the structure of "H acid."	
	4	Why the many of the dyes are water soluble?	
	5	Define the term Chromphores.	
	6	What is meant by D.V.S. Ratio?	
	7	Give the various ways of reduction of nitro compounds.	
	8	Define the term Electrophile and Nucleophile.	
	9	Convert Benzene to Toluene (Only reaction).	
	10	Give the prerequisites of the true dyes.	
	11	Write down the application of Disperse dyes.	
	12	Convert Toluene to Benzoic acid (Only reaction).	
	13	Give two example of Fastness Properties.	
	14	Enlist the reagent used in Friedel Craft alkylation reaction.	
Q.2	(a)	Write a note on: Koch acid.	03
	(b)	What happen when Anthracene is treated with, a. Br ₂ /CCl ₄	04
		b. O_2/V_2O_5 at 500^0 C	
		c. HNO ₃ /CH ₃ COOH	
		d. Na/C ₂ H ₅ OH	0=
	(c)	Discuss about Amination reaction. Explain the Bucherer reaction with the help	07
		of suitable reaction scheme.	
	(a)	OR Give the classification of dyes based on method of application.	07
Q.3	(c) (a)	Write a note on: Nucleophilic substitution reaction of Pyridine.	03
Ų.S	(a) (b)	Write a note on: Electrophilic substitution reaction of Pyridine.	03
	(c)	Explain the Sandmeryer's Process for the preparation of indigotin.	07
	(C)	OR	07
Q.3	(a)	Draw the structure of γ -acid and J-acid.	03
	(b)	Write the structure of Benzene isomer with formula C_8H_{10}	04
	(c)	Explain why,	07
		a. Pyridine is more basic than pyrrole.	
		b. Pyridine is less basic than aliphatic amine.	
		c. Pyridine is more basic than aniline.	
Q.4	(a)	Elaborate the concept of reduction reaction.	03
	(b)	Write a note on: Synthesis of Peri acid & Laurent acid.	04
	(c)	Explain the sulphonation of α- Napthalamine & β- Napthalamine	07

OR

Q.4	(a)	How will you synthesize Fast Red A?	03
	(b)	How will you synthesize Metanil Yellow?	04
	(c)	How will you synthesize the following compounds from diethyl- malonate?	07
		a. Dimethyl acetic acid	
		b. Succinic acid	
		c. Adipic acid	
		d. Crotonic acid	
		e. Glycine	
Q.5	(a)	How will you prepared Indanthrone yellow?	03
	(b)	How will you prepared solway ultrablue (anthraquinone acid dye)?	04
	(c)	Give the synthesis of following compounds form ethyl acetoacetate	07
		a. Adipic acid	
		b. Crotonic acid	
		c. Acetylacetone	
		d. Acetonylacetone	
		e. Succinic acid	
		OR	
Q.5	(a)	Give the synthesis of Amino G acid.	03
-	(b)	Write down the reaction of nitration of toluene.	04
	(c)	Explain the direct diazotization method with suitable reaction scheme.	07
