Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) - EXAMINATION – SUMMER 2018

Subject Code: 2163604 **Date: 05/05/2018**

Subject Name: Technology of Pigments

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 is Pigment? Explain with its types?	**03**
	(b)	What is Colour? Explain the concept of Colour blindness?	**04**
	(c)	Discuss Vapour phase oxidation with suitable example. Explain factors controlling it.	**07**
Q.2	**(a)**	What is the difference between pigments & fillers?	**03**
	(b)	Explain the processing, properties & applications of $BaSO_4$?	**04**
	(c)	Discuss co-precipitation with suitable example. Explain factors controlling precipitation.	**07**
		OR	
	(c)	Write short note on: Drying & Evaporation	**07**
Q.3	**(a)**	Explain the properties of Pigmentory TiO_2 in reference to specific gravity, oil absorption value, refractive index.	**03**
	(b)	Explain the processing, properties & applications of Barytes?	**04**
	(c)	Explain the synthesis of TiO_2 by Sulfate method with flow sheet?	**07**
		OR	
Q.3	**(a)**	What are lakes & toners?	**03**
	(b)	Explain properties of Prussian Blue pigments.	**04**
	(c)	Discuss Carbon black pigments with synthesis of any one of it?	**07**
Q.4	**(a)**	Discuss the difference between pigments & extenders.	**03**
	(b)	Explain the synthesis of ZnO pigments by using direct Process?	**04**
	(c)	Explain the synthesis of TiO_2 by Chloride Method with flow sheet?	**07**
		OR	
Q.4	**(a)**	Explain properties of Hansa Yellow pigments.	**03**
	(b)	Explain light fastness of pigments and factors affecting on it.	**04**
	(c)	What is bleeding tendency? Explain it with procedure.	**07**
Q.5	**(a)**	What is oil absorption value of pigments? Give significance of it.	**03**
	(b)	Explain the processing, properties & applications of $CaCO_3$?	**04**
	(c)	Explain the small scale preparation of Benzene with chemical reactions.	**07**
		OR	
Q.5	**(a)**	What is carbonization of coal?	**03**
	(b)	Explain Coal tar distillation and processing of distillation products?	**04**
	(c)	Explain the large scale preparation of Benzene with chemical reactions.	**07**

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