

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2022****Subject Code:3173620****Date:10-01-2023****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.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) What do you mean by corrosion?	03
	(b) Write a short note on: Anti corrosive pigments	04
	(c) Discuss active and barrier pigments with their corrosion resistance mechanism?	07
Q.2	(a) Give the optical properties of special effect pigments?	03
	(b) How will you classify the effect pigments on the basis of: 1.Refractive indices 2.Optical impressions?	04
	(c) Explain absorption, metal effect, natural pearl and pearl luster pigments with reference to their optical properties?	07
	OR	
	(c) Give the types of aluminum pigments with their manufacturing process, properties and applications?	07
Q.3	(a) Write down the Zinc rich primer formulation in details.	03
	(b) Elaborate passivation mechanism of corrosion resistance?	04
	(c) Give manufacturing, properties and applications of Iron Oxide pigments?	07
	OR	
Q.3	(a) What are functional pigments?	03
	(b) Write a short note on: Cuprous oxide pigments	04
	(c) Explain the Antifouling Coating with its functions?	07
Q.4	(a) Write a short note on: DOI	03
	(b) Give the various applications of Pearl luster Pigments?	04
	(c) Explain the manufacturing process of Mica-CaCO ₃ pigments?	07
	OR	
Q.4	(a) What are Ultramarine Pigments?	03
	(b) Write a short note on: Prussian Blue Pigments	04
	(c) Give synthesis & applications of Phthalocyanine pigments?	07
Q.5	(a) Write a short note on: Bismuth Pigments	03
	(b) Give synthesis and applications of cadmium Pigments?	04
	(c) Give manufacturing, properties and applications of Chromium Oxide Green Pigments	07
	OR	
Q.5	(a) Write a short note on: Nacreous Pigments	03
	(b) Give the difference between colored and effect pigments?	04
	(c) Give the industrial applications of mixed metal oxides?	07
