

Subject Code:2163604

Date:18/05/2019

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) Define the following:	03
(i) Pigment (ii) Extender (iii) Dyes	
(b) Write down the following properties of pigment:	04
(i) Particle size (ii) Oil absorption value	
(c) Discuss the detail classification of inorganic and organic pigments with suitable examples.	07
Q.2 (a) Explain the following terms:	03
(i) Vapour phase oxidation (ii) Calcination	
(b) Discuss about coal tar distillation and role of distillation products.	04
(c) Explain the following process for synthesis of pigment:	07
(i) Crushing and grinding (ii) Vaporization	
(iii) Filtration (iv) Drying	
OR	
(c) Discuss co-precipitation with suitable example. Explain factors controlling it.	07
Q.3 (a) Write down the properties and applications of TiO ₂ Pigment.	03
(b) Discuss the properties and applications of China clay and Magnesium silicate.	04
(c) Explain the manufacturing process of Calcium Carbonate extender pigment.	07
OR	
Q.3 (a) Write a note on: Hydrated aluminum oxide.	03
(b) Discuss about surface treatment, crystal structure and hiding power of TiO ₂ Pigment.	04
(c) Explain the chloride process for the manufacturing of TiO ₂ Pigment.	07
Q.4 (a) How do you differentiate channel black and furnace black pigment?	03
(b) Discuss the properties and applications of Zinc oxide pigment.	04
(c) Explain the manufacturing process of Zinc sulphide pigment in detail.	07
OR	
Q.4 (a) Write a note on: Lamp black pigment.	03
(b) Explain the following terms:	04
(i) Reducing strength (ii) Bleeding Tendency	
(c) Explain the process for synthesis of acetylene black pigment.	07
Q.5 (a) Write down the properties and applications of Chrome green pigment.	03
(b) Discuss about Ultramarine blue pigment.	04
(c) Explain the manufacturing process of copper Phthalocyanine pigment.	07
OR	
Q.5 (a) How do you measure the colour by using chromaticity diagram?	03
(b) Write down the properties and applications of Phthalocyanine green pigment.	04
(c) Explain the manufacturing process of Prussian blue pigment.	07
