

Shree Manibhai Virani and Smt. Navalben Virani Science College (Autonomous), Rajkot
Affiliated to Saurashtra University, Rajkot

SEMESTER END EXAMINATION APRIL - 2018

M.Sc. Industrial Chemistry

16PICDC05 – CHEMICAL TECHNOLOGY -II

Duration of Exam – 3 hrs

Semester – IV

Max. Marks – 70

Part A (5x2= 10 marks)

Answer **ALL** questions

1. Assign the factors influencing the strength of ceramic products.
2. List out various factors influencing the cleansing action of soap.
3. Enlist various steps used to avoid paint failure.
4. Give physical properties of TiO₂ pigment.
5. List out the compositions of sugar cane.

Part B (5x5 = 25 marks)

Answer **ALL** questions

- 6a. Give classification of ceramics based on the progressive reduction in porosity.

OR

- 6b. Explain chemical classification of refractories.

- 7a. Draw the process block diagram for the manufacturing of soap by continuous process.

OR

- 7b. Write a detailed note on manufacturing of shampoos.

- 8a. What are pigments? Enlist their principal properties for paint formulations.

OR

- 8b. Define the terms: i) Extenders, ii) Film forming material, iii) Thinners, iv) Anti-skinning agents and v) Plasticizers.

- 9a. Write a short note :

- i) Cobalt blues and
- ii) Iron blues pigments.

OR

- 9b. Write a short note on manufacturing of chrome green pigment.

- 10a. Write a short note on extraction of sugar cane juice. Draw a detailed flow diagram.

OR

- 10b. Explain evaporation or concentration step for the preparation of sucrose from cane sugar.

Part C (5x7 = 35 marks)

Answer **ALL** questions

11a. Give detailed discussion for various methods of applying colours to the ceramics wares.

OR

11b. Explain any seven properties of fire clay refractories.

12a. Write a detailed note on recovery of glycerin from spent lye.

OR

12b. Explain general consideration in soap making in detail.

13a. Discuss various methods for applying paints.

OR

13b. What do you mean by Pigment Volume Concentration (PVC)? Explain paint removers in detail.

14a. Explain detail manufacturing of ultramarine blue pigment.

OR

14b. Explain American process for manufacturing of ZnO pigment.

15a. Explain testing and estimation of sugar in detail.

OR

15b. Explain comprehensive manufacturing of sucrose from Beet root.
