

Exam.Code:5012  
Sub. Code: 11751

2056  
Bachelor of Science (FYUP) Second Semester  
Industrial Chemistry  
Applied Industrial Chemistry

Time allowed: 3 Hours

Max. Marks: 67

**NOTE: Attempt four questions in all, including Question No. 1 which is compulsory and selecting one question from each Unit.**

x-x-x

**Q1. Compulsory question**

**A) Multiple choice questions. (1 mark each)**

i) Which of the following is not a raw material for the manufacture of soap?

- a. Oil
- b. Fat
- c. Alkali
- d. salt

ii). Which of the following is not a type of ceramic?

- a. Refractory
- b. chinaware
- c. cement
- d. white ware

iii). Shampoo cannot be in

- a. Powder form
- b. Liquid form
- c. Aerosol form
- d. Emulsion form

iv). Which of the following is an industrial oil?

- a. Cottonseed oil
- b. sunflower oil
- c. sesame oil
- d. olive oil

v). Chemically oils and fats are:

- a. Fatty acids
- b. triglycerols
- c. trioleins
- d. sodium salt of fatty acids

P.T.O.



(2)

vi). Which of the following is not a raw material of cement?

- a. Limestone
- b. clay
- c. gypsum
- d. carbon

vii). Bagasse is obtained during the manufacture of

- a. Paper
- b. pulp
- c. sugar
- d. soap

viii). Burning process is used for the manufacture of

- a. sugar
- b. cement
- c. paper
- d. detergents

ix). Which of the following is a process for the synthesis of soap?

- a. Cold process
- b. hot process
- c. semi boiled process
- d. all of the above

**B) Short answer type questions. (2 marks each)**

- i). What are saturated and unsaturated fatty acids? Give one example each.
- ii). Write a short note on hardening of Portland cement.
- iii). What are composites? Give example.
- iv). Give uses of Eucalyptus oil and Rose oil.
- v). Differentiate between soaps and detergents.

### UNIT-1

**Q2. i) What is saponification? Explain the mechanism of action of soap and detergent.**

**ii). Differentiate between soap and detergent.**

**iii). Explain acid value, and iodine value.**

(6,4,6)

**Q3. i) What are the chemicals used in paper manufacturing?**

**ii). Explain the main processes of manufacture of soap.**

**iii). Explain in detail pulping techniques for the manufacture of paper.**

(4,6,6)

(3)

**UNIT-2**

- Q4. i) Explain in details the classification of refractories.**  
ii). What are ceramic materials? Give their classification.  
iii). Explain the following terms:  
a) Molasses  
b) Sulphitation process  
c) Hardening of Portland cement

(6,4,6)

- Q5. i) Explain in detail the steps involved in the manufacture of cane sugar.**  
ii). What are the by-products of sugar industry?  
iii). Explain in detail the flowchart for the manufacture of Portland cement.

(6,4,6)

**UNIT-3**

- Q6. i) What are essential oils? Give the importance of Eugenol and Geraniol in cosmetic industries.**  
ii). Describe the preparation and uses of cold creams.  
iii). Explain the preparation and uses of shampoo.

(6,4,6)

- Q7. i) What are cosmetics? Explain their classification according to their use.**  
ii). Describe the preparation and uses of face powder and talcum powder.  
iii). What are vanishing creams. Explain their preparation and uses.

(4,6,6)

x-x-x