

Scheme G
Sample Test Paper-I

Course Name : Diploma in Chemical Engineering

Course Code : CH

Semester : Fourth

Subject Title : Chemical Process Technology II

Marks : 25

17427

Time: 1 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Assume suitable data if necessary
5. Preferably, write the answers in sequential order

Q1. Attempt any THREE

9 Marks

- a) Define fermentation. Give one fermentation reaction.
- b) Name any three types of paint and give their applications.
- c) Define saponification value of oil.
- d) Define hiding power of paint.

Q2. Attempt any TWO

8 Marks

- a) Draw flow diagram for manufacture of ethyl alcohol from molasses..
- b) Draw flow sheet for manufacture of paint.
- c) Compare between soap and detergent.

Q3. Attempt any TWO

8 Marks

- a) Give raw materials, reactions and uses of acetic acid.
- b) Give constituents of white, black, blue and red pigments.
- c) Describe with flow sheet hydrogenation of oil with neat flow diagram.

Scheme G
Sample Test Paper-II

Course Name : Diploma in Chemical Engineering

Course Code : CH

Semester : Fourth

Subject Title : Chemical Process Technology II

Marks : 25

17427

Time: 1 hour

Instructions:

6. All questions are compulsory
7. Illustrate your answers with neat sketches wherever necessary
8. Figures to the right indicate full marks
9. Assume suitable data if necessary
10. Preferably, write the answers in sequential order

Q1. Attempt any THREE

9 Marks

- a) Define polymerization and give its classification.
- b) Differentiate between sulphate and sulphite process for manufacture of pulp.
- c) Give reactions involved in the manufacture of phenol by cumene peroxidation process.
- d) Draw flow diagram for manufacture of PVC.

Q2. Attempt any TWO

8 Marks

- a) Give raw materials, reaction and uses of Rayon.
- b) Describe Raschig process for phenol.
- c) Draw flow diagram for manufacture of polyester.

Q3. Attempt any TWO

8 Marks

- a) List raw materials for the manufacture of paper. Which additives are used to improve quality of paper?
- b) Draw flow diagram for manufacture of phenol by toluene oxidation process.
- c) Describe manufacture of polyethylene.

Scheme G
Sample Question Paper

Course Name : Diploma in Chemical Engineering

Course Code : CH

Semester : Fourth

Subject Title : Chemical Process Technology II

Marks : 100

17427

Time: 3 hour

Instructions:

1. All questions are compulsory
2. Illustrate your answers with neat sketches wherever necessary
3. Figures to the right indicate full marks
4. Preferably, write the answers in sequential order

Q.1 A Attempt any SIX

12 Marks

- a. List four sources of Cellulose pulp.
- b. Define Iodine Value of oil.
- c. What is Vinegar? State its uses.
- d. List enzymes used in manufacture of ethanol by Corn and Molasses process.
- e. List desirable properties of solvent used in Solvent Extraction of oil from oilseeds.
- f. State importance of Acid Value of oil.
- g. Write only reactions for manufacture of Rayon.

Q.1B Attempt any TWO.

08 Marks

- a. List raw materials and give reactions for manufacture of Polystyrene from Benzene.
- b. Give constituents of White, Black, Blue and Red pigments.
- c. Describe cleansing action of soap.

Q.2 Attempt any FOUR

16 Marks

- a) Describe manufacture of Butanol.
- b) Describe spirit and oil varnish.
- c) Draw Sulphite process for pulp manufacture.

- d) Describe manufacture of phenol by Caustic Hydrolysis of Chlorobenzene.
- e) Draw Ziegler process for manufacture of Polyethylene.
- f) Describe Hot process for manufacture of Soap.

Q3. Attempt any FOUR

16 Marks

- a) Describe manufacture of Acetic Acid from Acetaldehyde.
- b) What are lacquers ? Give 2 industrial applications.
- c) Why lignin is extracted from pulp?
- d) Write reactions for manufacture of Phenol from Toluene. Write raw materials and uses of Phenol.
- e) Describe manufacture of PVC by Emulsion polymerization.
- f) Give classification of polymers.

Q.4 Attempt any FOUR

16 Marks

- a) Describe High Pressure process for manufacture of Polyethylene.
- b) Differentiate between Varnish and Lacquers.
- c) Describe manufacture of Butanol from Propylene.
- d) Describe manufacture of detergents from Alkyl Aryl Sulphonates.
- e) Describe manufacture of fats by hydrogenation of oils.
- f) Draw only flow sheet for manufacture of Polystyrene.

Q.5 Attempt any TWO

16 Marks

- a) Describe with reactions and flow sheet manufacture of Ethanol from Corn.
- b) Describe in detail and flow sheet for extraction of oil.
- c) Explain manufacturing process of phenol by Rasching Process with reaction & flow Sheet

Q.6 Attempt any TWO

16 Marks

- a) Describe manufacturing of paper by Kraft Process with flow sheet.
- b) Explain manufacturing process of polyester from DMT & EG with neat flow diagram
- c) Describe Peroxidation process for manufacture of Phenol with reaction & flow sheet.