

Register No: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SIXTH SEMESTER B.TECH DEGREE EXAMINATION (R), MAY 2023

CHEMICAL ENGINEERING

(2020 SCHEME)

Course Code : 20CHT306

Course Name: Chemical Technology

Max. Marks : 100

Duration: 3 Hours

PART A

(Answer all questions. Each question carries 3 marks)

1. List out the constituents of producer gas and water gas?
2. What are the major engineering problems related to DCDA process?
3. Differentiate diaphragm cell and membrane cell used for electrolysis reactions?
4. Write down the Mono ammonium phosphate (MAP) and diammonium phosphate (DAP) formation reaction
5. List the uses of activated carbon.
6. What are the requirements of a good paint?
7. Define Lacquers and mention its application
8. Differentiate between sulphate and sulphite process for pulp manufacture
9. Write the significance of hydrogenation process of oils.
10. List any three waxes and explain their source.

PART B

(Answer one full question from each module, each question carries 14 marks)

MODULE I

11. Explain with a neat process flow diagram for the manufacture of phosphorous and phosphoric acid by electric furnace process. (14)
Mention their applications.

OR

12. a) Explain the manufacture of carbon dioxide with the help of a neat flow sheet. (7)
b) With a neat flow diagram explain the manufacture of hydrogen gas. (7)

MODULE II

13. Explain with a neat flow sheet the manufacture of soda ash by Solvay process. (14)

OR

14. a) Demonstrate Haber's process using a neat flow diagram? (7)
b) Explain the manufacture of sodium chloride. (7)

MODULE III

15. Describe the manufacture of synthetic graphite with a neat sketch and mention its properties. (14)

OR

16. Explain the types of pigments and draw the flow diagram of Titanium dioxide manufacturing. (14)

MODULE IV

17. Explain Kraft process with a neat flow diagram? (14)

OR

18. Explain raw materials, properties and uses of five different types of glasses. (14)

MODULE V

19. Describe the manufacturing process of absolute alcohol with neat flow sheet (14)

OR

20. With a neat flow sheet, explain the manufacture of beer. (14)
