

T.E- V Sem - Chem
Chemical Technology

(18)

Q.P. Code : . 31064

(3 Hours)

[Total Marks : 80

- N.B. : (1) Question No. 1 is compulsory.
(2) Attempt any three questions out of the remaining five.
(3) Figures to the right indicate full marks.
(4) Draw neat flow diagrams wherever required.

1. (a) Describe the manufacturing of soda ash modified Solvay (Dual) process. 10
(b) Discuss the engineering problem involved in the manufacture of hydrochloric acid. 4
(c) Describe various engineering problem associated during the manufacturing of sulfuric acid. 6
2. (a) Explain how and why xylene isomerisation is carried out. 10
(b) Describe the manufacturing of nitric acid from ammonia. 10
3. (a) Describe the manufacturing process of urea. What are the engineering problems in urea synthesis process? 10
(b) Explain the manufacturing of sugar with neat flow diagram. 10
4. (a) Describe manufacture of single superphosphate. Write down the reactions involved in it. How the byproducts that are generated during this process made harmless? 10
(b) Describe the manufacturing of polyethylene by Ziegler process. 10
5. (a) Explain the manufacturing of acetylene by partial oxidation with neat flow diagram. 10
(b) Describe in detail manufacturing of purified terephthalic acid. 10
6. Write short notes on (Any Four) 20
(a) Agrochemicals
(b) Unit operations and unit processes
(c) Reforming and cracking
(d) Hydrogenation of oil
(e) Soaps and detergents