

V

Chemical Technology

23

Q.P. Code : 3389

(3 Hours)

[Total Marks : 80

- N.B. : (1) Question No. 1 is compulsory.
(2) Solve any 3 questions out of remaining five.
(3) Draw flowcharts, diagrams wherever necessary.

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| 1. (a) | Describe DCDA process used for manufacture of sulphuric acid from elemental sulphur. Also explain why multistage reactor and interpass absorption column is used? | 10 |
| (b) | Describe manufacture of biodiesel. | 6 |
| (c) | Describe membrane cell used for manufacture of caustic soda. | 4 |
| 2. (a) | Describe solvay process for manufacture of soda ash. | 10 |
| (b) | Describe manufacture of ammonia. | 10 |
| 3. (a) | Discuss advantages and disadvantages of various processes used for manufacture of phenol. | 10 |
| (b) | Describe manufacture of ethanol from molasses. | 10 |
| 4. (a) | Describe xylenes separation. | 10 |
| (b) | What is LDPE, HDPE, LLDPE. Describe manufacture of LLDPE. | 10 |
| 5. (a) | Describe manufacture of phosphoric acid by wet process using hydrochloric acid. | 10 |
| (b) | Describe manufacture of nitric acid from ammonia. | 10 |
| 6. | Write short notes on any four | 20 |
| (i) | Present and future trends in chemical industries in India. | |
| (ii) | Hydrogenation of oil | |
| (iii) | Perfumery chemicals | |
| (iv) | Fluidized bed catalytic cracking unit used for naphtha cracking. | |
| (v) | Effect of operating parameters in Urea process. | |