

N.B.

1. Question No. 1 is Compulsory.

2 Attempt any Three Questions from remaining Five Questions

3. Assume Suitable Data if needed and Justify the Same

4. Figures to the right indicate full marks.

- Que.1** Answer any three [15]
- Write short note on Scope of Chemical Engineering
 - What is Size reduction and draw neat sketch of Blacke Jaw Crusher
 - Define Sulphonation and Dehydration with suitable reactions
 - Give Difference between fire tube and water tube boilers
- Que.2**
- A gas mixture consists of 6 moles of CO_2 , 4 moles of N_2 , and 5 moles of O_2 . Calculate the mole percentage and mass percentage of CO_2 , N_2 , and O_2 in the mixture. [10]
 - Calculate the amount of HCl (hydrochloric acid) required to prepare 1 liter of 2 N HCl solution. [05]
- Que.3**
- Explain in detail sulphuric acid production (DCDA Process) with flow sheet [10]
 - Explain in detail working principle of Distillation with neat sketch [05]
- Que.4**
- List out level measurement instruments. Explain any one in detail. [10]
 - What is plant utility? List out different types of utilities with their uses. [05]
- Que.5**
- Explain Construction and working of Locomotive Boiler with neat sketch [10]
 - What are different modes of heat transfer? Explain with example [05]
- Que.6** Write short note (Any three) [15]
- Mercury Thermometer
 - Personal Protective Equipments (PPE)
 - Oxidation and Chlorination.
 - Red wood viscometer
