

## **QUESTION BANK FOR CHEMICAL PROCESS INDUSTRIES-I**

Sl No.	Chapter	Question	CO	BTL
1	Chapter 1: Concept of Unit Operation & Unit Process	Explain the chemistry behind the manufacturing of sulfuric acid by the contact process.	C214.1	Level 2: Understand, Level 3: Apply
2	Chapter 1: Concept of Unit Operation & Unit Process	Identify the key engineering problems in the production of sulfuric acid and suggest improvements.	C214.3	Level 1: Identify, Level 5: Evaluate
3	Chapter 2: Industrial Gases	Outline the manufacturing process of ammonia from propane with a flow sheet and explain the chemical reactions.	C214.1	Level 4: Analyze, Level 2: Understand
4	Chapter 3: Acids	Discuss the reactions involved in the production of nitric acid by ammonia oxidation.	C214.1	Level 2: Understand, Level 3: Apply
5	Chapter 4: Chloro-Alkali Industry	Compare the economic aspects of producing hydrogen via different methods (e.g., from propane, electrolysis).	C214.2	Level 4: Analyze, Level 5: Evaluate
6	Chapter 5: Pulp and Paper Industry	Correlate the production of acetylene and its economic viability in comparison to other industrial gases.	C214.2	Level 4: Analyze, Level 5: Evaluate
7	Chapter 5: Pulp and Paper Industry	Describe how unit operations like distillation, filtration, and drying are integrated in the pulp and paper industry.	C214.4	Level 3: Apply, Level 4: Analyze
8	Chapter 6: Cement Industry	Analyze the economic factors influencing the choice of process technology for cement manufacturing.	C214.2	Level 5: Evaluate, Level 3: Apply
9	Chapter 6: Cement Industry	Explain how unit operations are employed in the manufacturing of cement, and how they contribute to product quality.	C214.4	Level 3: Apply, Level 4: Analyze
10	Chapter 7: Metallurgical Industries	Identify the major engineering problems in the production of ammonia and discuss possible solutions.	C214.3	Level 1: Identify, Level 5: Evaluate
11	Chapter 7: Metallurgical Industries	Demonstrate the use of unit operations in the manufacturing of alumina from bauxite.	C214.4	Level 3: Apply, Level 4: Analyze
12	Chapter 8: Fertilizers	Discuss the engineering challenges in the electrolytic process for manufacturing caustic soda.	C214.3	Level 4: Analyze, Level 5: Evaluate