U.S.N.										

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

January / February 2025 Semester End Main Examinations

Programme: B.E. **Semester: V**

Branch: Chemical Engineering **Duration: 3 hrs.**

Course Code: 23CH5PCCTN **Max Marks: 100**

Course: Chemical Technology

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

			CO	PO	Marks
		UNIT - I			
1	a)	Write a neat flow chart explain the production of N_2 and O_2 with process description.	*CO2*	*PO2*	**10**
	b)	What do you mean by Unit operation and Unit process? Give three examples for each.	*CO1*	*PO2*	**10**
		OR			
2	a)	Explain in detail about coking of coal with a neat PFD.	*CO4*	*PO10*	**10**
	b)	What are the constituents of petroleum? Explain about them in detail.	*CO1*	*PO2*	**10**
		UNIT - II			
3	a)	With a neat flow chart and reactions, explain about the manufacture of sulphuric acid.	*CO2*	*PO2*	**10**
	b)	Write about the characteristics of the catalyst used in the above process. Also give the advantages and disadvantages of the catalyst used.	*CO3*	*PO7*	**10**
		OR			
4	a)	With a neat flow chart and reactions involved, explain in detail about the production of soda Ash.	*CO2*	*PO2*	**10**
	b)	Write about the major engineering problems encountered in the production of i. Ammonia ii. Nitric Acid iii. Phosphoric acid	*CO3*	*PO7*	**10**
		UNIT - III			
5	a)	With a neat flow chart, explain about the manufacture of sucrose and highlight the major engineering problems encountered.	*CO2*	*PO2*	**10**

		b)	With a neat flow chart, explain about the hydrogenation of oil.	*CO4*	*PO10*	**10**
			OR			
	6	a)	With a neat flow chart, explain about the extraction of vegetable oil.	*CO2*	*PO2*	**10**
		b)	Explain about the production of linear alkyl benzene sulphonate (LABS).	*CO1*	*PO2*	**10**
			UNIT - IV			
	7	a)	With a neat flow chart, explain about the production of paper.	*CO2*	*PO2*	**10**
		b)	Explain about the production of PVC with a neat PFD.	*CO1*	*PO2*	**10**
			OR			
	8	a)	With a neat flow chart, explain about the manufacture of polyethylene	*CO2*	*PO2*	**10**
		b)	Write about the major engineering problems encountered in the production of: i. Ethyl alcohol ii. Pulp	*CO3*	*PO7*	**10**
			UNIT - V			
	9	a)	With a neat flow chart, explain in detail about the production of urea	*CO2*	*PO2*	**10**
		b)	Highlight the major engineering problems encountered in the production of urea and zinc oxide.	*CO3*	*PO7*	**10**
			OR			
	10	a)	With a neat flow chart and reactions explain about the manufacture of Portland Cement.	*CO2*	*PO2*	**10**
		b)	Highlight the major engineering problems encountered in the manufacture of Portland cement and titanium dioxide.	*CO3*	*PO7*	**10**

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