

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

Autonomous Institute Affiliated to VTU

## August 2024 Supplementary Examinations

**Programme: B.E.**

**Branch: Chemical Engineering**

**Course Code: 19CH7DCCTN**

**Course: Chemical Technology**

**Semester: VII**

**Duration: 3 hrs.**

**Max Marks: 100**

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

### UNIT - I

1.	a) Discuss the components of the flow sheet with an example. <span style="float: right;"><b>08</b></span>
	b) Discuss about air separation technology to produce oxygen with minute impurities from a cryogenic industry. <span style="float: right;"><b>12</b></span>

**OR**

2.	a) In detail, explain the concepts of Coking of Coal with a neat flow diagram. <span style="float: right;"><b>10</b></span>
	b) Explain the Linde -Frankl's process of production of oxygen and list its limitations. <span style="float: right;"><b>10</b></span>

### UNIT - II

3.	a) Explain the major engineering problems encountered in Solvay process. <span style="float: right;"><b>08</b></span>
	b) With a neat flow chart explain the phosphoric acid manufacturing highlighting the major engineering problems. <span style="float: right;"><b>12</b></span>

### UNIT - III

4.	a) How soaps are classified? <span style="float: right;"><b>04</b></span>
	b) Explain the process of saponification used in the manufacture of soap. <span style="float: right;"><b>06</b></span>
	c) With neat flow chart, explain extraction process of vegetable oil and list the major engineering problem encountered. <span style="float: right;"><b>10</b></span>

### UNIT - IV

5.	a) How effluent treatment for pulp and paper industries is carried out? Explain using a neat block diagram. <span style="float: right;"><b>10</b></span>
	b) With a flow diagram, explain the manufacture of ethanol from molasses highlight the major Engineering problems encountered and its applications. <span style="float: right;"><b>10</b></span>

**OR**

6. a) Explain the major engineering problems in fermentation industries. **08**  
b) With a neat flow sheet explain the production of *penicillin*. **12**

**UNIT - V**

7. a) With a neat flow sheet explain the manufacture of urea production. **10**  
b) How is paint manufactured? What is the importance of zinc oxide and titanium dioxide in the manufacture of paint? Explain. **10**

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SUPPLEMENTARY EXAMS 2024