

Name:  
Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Semester Examination, May 2019**

**Course: Chemical Technology**  
**Program: B.Tech CE+RP**  
**Course Code: CHCE2010**

**Semester: IV**  
**Time 03 hrs.**  
**Max. Marks: 100**

**Instructions:**

**SECTION A**

S. No.		Marks	CO
Q 1	What do you mean by cement clinkers? Differentiate between cement and clinkers.	4	CO1
Q 2	What is soda ash? List its various applications.	4	CO2
Q 3	What are superphosphates and triple superphosphates? Give an example of each.	4	CO3
Q 4	What is rancidity? How would you overcome it?	4	CO4
Q 5	Differentiate between thermosetting and thermoplastic polymers	4	CO5

**SECTION B**

Q 6	What are ceramics? Explain the steps involved in the manufacturing of ceramics.	10	CO1
Q 7	Describe the electrolytic process of manufacturing caustic soda using membrane cell process with the help of a neat diagram.	10	CO2
Q 8	Discuss the role of fertilizer industry in India. OR Explain the production process of potassium sulfate by Mannheim process	10	CO3
Q 9	Differentiate between soap and detergent. With the help of a neat process flow diagram, discuss the manufacturing steps of soap and glycerin. OR Explain the production of sugar from sugarcane, with the help of a neat flow sheet.	10	CO4

**SECTION-C**

Q 10	(a) List five natural products used in chemical industries. Mention two applications of each of them (b) With the help of a neat process flow diagram, discuss the manufacturing of paper from pulp. W	20	CO4
------	---	----	-----

	<p>(c) What is the technical difference between Sulfate (Kraft) Process and Sulfite Process used in pulp and paper industry?</p> <p style="text-align: center;">OR</p> <p>(a) Differentiate between edible and non-edible oils. Give an example of each.  (b) With the help of a neat process flow diagram, discuss the various steps involved in extraction of vegetable oil from seeds.</p>		
Q 11	What are Synthetic Organic Chemicals? Discuss the classification of polymers based on the physico-chemical structures and their engineering applications.	<b>20</b>	<b>CO5</b>