


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, May 2022			
Course: Polymer Science and Engineering Program: B. Tech (CERP) Course Code: CHCE 3011P		Semester: VI Time : 03 hrs. Max. Marks: 100	
Instructions: Answer all the questions			
SECTION A (5Qx4M=20Marks)			
S. No.	Statement of question	Marks	CO
Q 1	Describe about mechanism of cationic addition polymerization	4	CO2
Q 2	Calculate number average and weight average molecular weight of a polymer sample containing the following molecules: 2×10^5 , 5×10^5 , 6×10^5 , 3×10^4	4	CO4
Q 3	Why the anionic polymerization is called living polymerization. Explain.	4	CO2
Q 4	Discuss briefly about reactivity ratios and copolymerization behaviour	4	CO3
Q 5	Describe about the reactions, Hydrolysis and Hydrogenation	4	CO5
SECTION B (4Qx10M= 40 Marks)			
Q	Statement of question		
Q 6	List out various types of polymer degradation. Discuss about oxidative degradation	10	CO5
Q 7	Describe Polymer nomenclature	10	CO1
Q 8	Describe the concept of Number average molecular weight and weight average molecular weight	10	CO4
Q 9	List out various advanced polymerization methods. Describe Group Transfer Polymerization Or Describe atom transfer radical polymerization	10	CO2
SECTION-C (2Qx20M=40 Marks)			
Q 10	Explain condensation polymerization when No catalyst is added and when the catalyst is added (Or) Discuss classification polymers in detail	20	CO1

Q 11	Discuss about Emulsion polymerization in detail.	20	CO3
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