


Name:			
Enrolment No:			
<b>UPES</b> <b>End Semester Examination, December 2023</b>			
<b>Program Name: Int. B.Sc. M.Sc. Chemistry</b>		<b>Semester : V Sem</b>	
<b>Course Name: Organic Chemistry IV</b>		<b>Time : 3.0 hrs</b>	
<b>Course Code: CHEM-3025</b>		<b>Max. Marks : 100</b>	
<b>Nos. of page(s): 2</b>			
<b>Instructions:</b> Read all the below mentioned instructions carefully and follow them strictly.			
1) Mention Roll No. at the top of the question paper.			
<b>ATTEMPT ALL THE PARTS OF A QUESTION AT ONE PLACE ONLY.</b>			
<b>SECTION A</b> <b>(5Qx4M=20Marks)</b>			
<b>S. No.</b>		<b>Marks</b>	<b>CO</b>
Q 1	Explain the terms nucleosides and nucleotides in context of nucleic acids.	4	CO1
Q 2	Discuss the difference between catabolic and anabolic pathways of metabolism.	4	CO1
Q 3	Define the term saponification number and its significance.	4	CO1
Q 4	Describe the Strecker's synthesis for the synthesis of amino acids.	4	CO1
Q 5	Discuss the specificity of enzyme action.	4	CO2
<b>SECTION B</b> <b>(4Qx10M= 40 Marks)</b>			
Q 6	Describe the six main groups of enzymes. What are the competitive and non-competitive inhibitors.	10	CO2
Q 7	What is FAD. Discuss the role of FAD in the generation of ATP.	10	CO1
Q 8	Discuss carbon terminal protection groups. What is the need of protecting groups in the study of protein synthesis.	10	CO2
Q 9	Explain the synthesis of Ibuprofen and its mechanism of action as analgesics with its side effects.  <b>OR</b> Define the antibiotic and antimicrobial agents. Explain various properties of Chloramphenicol.	10	CO3
<b>SECTION-C</b> <b>(2Qx20M=40 Marks)</b>			
Q 10	Define the RNA structure with its different types. How protein synthesis occurs by it.	20	CO1

Q 11	What is fermentation. Discuss its types and pathways with its input and output. <b>OR</b> Discuss the ATP structure with its hydrolysis with suitable diagram.	20	CO1
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