

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-III(New) EXAMINATION – SUMMER 2016**

**Subject Code:2130501****Date:27/05/2016****Subject Name:Organic Chemistry and Unit Processes****Time:10:30 AM to 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		<b>MARKS</b>
<b>Q.1</b>	<b>Short Questions</b>	<b>14</b>
	<ol style="list-style-type: none"> <li>1 Which radical is obtained after bracking of covalent bond ?</li> <li>2 Resolution of Racemic mixture means compound is optically.</li> <li>3 Give one example of Unit process.</li> <li>4 Write the chemical formula of Oxalic acid.</li> <li>5 What do you meant by hetero atoms ?</li> <li>6 What do you meant by spent acid ?</li> <li>7 What is Halogenation ?</li> <li>8 Which is the best example of polynuclear compound ?</li> <li>9 How many chiral carbon present in glucose ?</li> <li>10 Which is other name of Beat sugar ?</li> <li>11 Which effects are also known as redship and blueship ?</li> <li>12 Give the one example of anticracking.</li> <li>13 Why should nail and hair insoluble in water?</li> <li>14 What is chromogen ?</li> </ol>	
<b>Q.2</b>	<ol style="list-style-type: none"> <li>(a) Classification of dye based on application and structural representation. <span style="float: right;"><b>03</b></span></li> <li>(b) Explain synthetic petrol by Bergius process. <span style="float: right;"><b>04</b></span></li> <li>(c) Discuss about the manufacturing process of nitrobenzene from benzene by continuous nitration with fortified spent acid. <span style="float: right;"><b>07</b></span></li> </ol>	
<b>OR</b>		
	<ol style="list-style-type: none"> <li>(c) What is amination by reduction? Discuss various chemical and physical factors affecting an amination by reduction. <span style="float: right;"><b>07</b></span></li> </ol>	
<b>Q.3</b>	<ol style="list-style-type: none"> <li>(a) Explain chemistry of Dextrose. <span style="float: right;"><b>03</b></span></li> <li>(b) Explain antimalarial drug with suitable example. <span style="float: right;"><b>04</b></span></li> <li>(c) What do you understand by electrophile and nucleophile? Exaplain reaction and mechanism of addition reaction. <span style="float: right;"><b>07</b></span></li> </ol>	

**OR**

<b>Q.3</b>	<b>(a)</b> Classification of proteins.	<b>03</b>
	<b>(b)</b> Describe octane and cetane number with suitable examples,	<b>04</b>
	<b>(c)</b> What is optical activity? Explain optical activity in tartaric acid.	<b>07</b>
<b>Q.4</b>	<b>(a)</b> Write the derivatives of naphthalene.	<b>03</b>
	<b>(b)</b> Classification of bond fission with examples.	<b>04</b>
	<b>(c)</b> Discuss preparation, properties and applications of Palmitic and stearic acid.	<b>07</b>
<b>OR</b>		
<b>Q.4</b>	<b>(a)</b> Write the derivatives of carboxylic acid.	<b>03</b>
	<b>(b)</b> What do you understand by geometrical isomerism ?	<b>04</b>
	<b>(c)</b> Explain chemistry of any two five member ring of hetero cyclic compounds.	<b>07</b>
<b>Q.5</b>	<b>(a)</b> What do you understand by polymerization ?	<b>03</b>
	<b>(b)</b> Write the industrial applications of dye and pigments.	<b>04</b>
	<b>(c)</b> Manufacturing of canesugar from sugar cane with flow sheet diagram.	<b>07</b>
<b>OR</b>		
<b>Q.5</b>	<b>(a)</b> Define halogenation, hydrogenation and hydrolysis.	<b>03</b>
	<b>(b)</b> Write the applications of sulphadiazine.	<b>04</b>
	<b>(c)</b> Describe the reaction, mechanism and applications of Michael Reaction.	<b>07</b>

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