

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-III (NEW) EXAMINATION – WINTER 2020****Subject Code:3133601****Date:06/03/2021****Subject Name:Introduction to Medicinal Chemistry, Biochemistry & Physiology****Time:10:30 AM TO 12:30 PM****Total Marks:56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		<b>Marks</b>
<b>Q.1</b>	(a) What are selective COX-2 inhibitors? Give two examples.	<b>03</b>
	(b) Write the synthesis & Metabolism of Isoniazid-an anti-tubercular drug	<b>04</b>
	(c) What is the medical condition called “Gout”? How the anti-gout agents work? Give suitable example with structures.	<b>07</b>
<b>Q.2</b>	(a) Define the terms i).Drug ii). SAR iii). MOA	<b>03</b>
	(b) Write the Classification & mode of action of Azole class of antifungal agent.	<b>04</b>
	(c) Explain SAR and mode of action of Sulfonamides.	<b>07</b>
<b>Q.3</b>	(a) Define the terms i). Transamination ii). Deamination	<b>03</b>
	(b) Write the synthesis of Nimesulide	<b>04</b>
	(c) What is Glycolysis? Explain Glycolysis in detail with ATP Synthesis. Explain the Glycolysis pathway in detail.	<b>07</b>
<b>Q.4</b>	(a) Mention the differences between DNA & RNA	<b>03</b>
	(b) What are i). Diagnostic agents, ii). Antiseptics, iii). Disinfectants iv). Bacteriostatic activity and bactericidal activity Give one example for each category.	<b>04</b>
	(c) Describe Protein bio-synthesis.	<b>07</b>
<b>Q.5</b>	(a) Write a note on Nephron	<b>03</b>
	(b) How diuretics will act on urinary system	<b>04</b>
	(c) Draw the diagram of different parts of kidney with their function.	<b>07</b>
<b>Q.6</b>	(a) Explain composition and functions of blood in detail	<b>03</b>
	(b) Write a short note on Cardiac cycle.	<b>04</b>
	(c) Define Cell & Mention the functions of cell organelles? Draw the diagram of a cell and label its different parts with function.	<b>07</b>
<b>Q.7</b>	(a) Define i). Acidity ii) Bascity iii) pKa	<b>03</b>
	(b) Mention the Physicochemical factors affecting drug absorption	<b>04</b>
	(c) Write a note on Route of drug administration	<b>07</b>
<b>Q.8</b>	(a) What is GMP? Mention its applications towards pharmaceutical industry	<b>03</b>
	(b) Write the pathway of $\beta$ -Oxidation of Fatty acids	<b>04</b>
	(c) Define drug metabolism. Write its importance. Describe the pathways with suitable example	<b>07</b>