

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. SEMESTER- VIII-EXAMINATION – SUMMER -2022**

**Subject Code: BP808TT****Date: 06/06/2022****Subject Name: Cell and Molecular Biology****Time: 10:30am to 01:30pm****Total Marks: 80****Instructions:**

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

<b>Q.1</b>	(a) Briefly explain about Transfer RNA (tRNA).	<b>06</b>
	(b) Explain the history of cell biology.	<b>05</b>
	(c) Explain the structure of microtubules.	<b>05</b>
<b>Q.2</b>	(a) Briefly explain about the prokaryotic and eukaryotic cell with neat diagram.	<b>06</b>
	(b) What is meiosis? Describe the various stages of meiosis division.	<b>05</b>
	(c) Describe the structure and function of bacterial cell wall.	<b>05</b>
<b>Q.3</b>	(a) What are the check points and their role in Cell cycle?	<b>06</b>
	(b) Write an account on nucleosomes.	<b>05</b>
	(c) Explain the regularities in protein pathways.	<b>05</b>
<b>Q.4</b>	(a) Give a short note on Transcription.	<b>06</b>
	(b) Write a note on the central dogma.	<b>05</b>
	(c) Outline the positive control and significance of protein synthesis.	<b>05</b>
<b>Q.5</b>	(a) Explain about mitosis.	<b>06</b>
	(b) Define cell and molecular biology.	<b>05</b>
	(c) Outline of the properties of cells and cell membrane.	<b>05</b>
<b>Q.6</b>	(a) Define the term “secondary messenger”. Briefly describe the role of these molecules in signalling pathway.	<b>06</b>
	(b) Differentiate between DNA and RNA.	<b>05</b>
	(c) Explain in detail about the DNA functions.	<b>05</b>
<b>Q.7</b>	(a) List and briefly define the stages of cell signaling.	<b>06</b>
	(b) Write a note on protein kinase.	<b>05</b>
	(c) Discuss about the misregulation of cell signalling pathways.	<b>05</b>

\*\*\*\*\*