

# B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

## August 2024 Supplementary Examinations

**Programme: B.E.**

**Semester: VII**

**Branch: CIVIL ENGINEERING**

**Duration: 3 hrs.**

**Course Code: 21CV7BSBFE**

**Max Marks: 100**

**Course: Biology for Engineers**

**Instructions:** 1. Answer any FIVE full questions, choosing one full question from each unit.  
 2. Missing data if any, may be suitably assumed.

### UNIT - I

1	a) “DNA is the reserve bank of genetic information” justify it.	<b>04</b>
	b) Illustrate about two water soluble vitamins with their deficiencies.	<b>06</b>
	c) Discuss about Maltose and Sucrose with applications.	<b>06</b>
	d) Write a short note on Chromosome.	<b>04</b>

### OR

2	a) Distinguish between prokaryotic and eukaryotic cells	<b>05</b>
	b) Predict the secondary structure of Protein with examples.	<b>06</b>
	c) Criticize about Cholesterol and explain the functions of it.	<b>06</b>
	d) Write short note on Retinol.	<b>03</b>

### UNIT - II

3	a) Describe about any two factors affecting enzyme activity.	<b>08</b>
	b) Define active site of an enzyme. Explain the salient features of active site.	<b>06</b>
	c) Discuss about Cofactors and its functions.	<b>06</b>

### UNIT - III

4	a) What are antibodies? Explain any one antibody and its biological functions	<b>07</b>
	b) Discuss about adaptive immunity in the immune system.	<b>07</b>
	c) Rewrite the Contributions of Robert Koch and Louis Pasteur in Microbiology	<b>06</b>

### UNIT - IV

5	a) Define Biosensors. Explain the Characteristics and types of a biosensor	<b>07</b>
	b) Write note on Biochips.	<b>07</b>
	c) What is Bioinformatics? Explain its applications using tools.	<b>06</b>

## UNIT - V

6	a) Define Genetic Engineering and explain its biological applications.	<b>07</b>
	b) What are Stem cells? Explain the properties of important stem cells and their applications.	<b>08</b>
	c) Infer about Genetics and its principles.	<b>05</b>

## OR

7	a) Discuss about Plasmids, its types with example and biological functions.	<b>08</b>
	b) Define Neural Network and its applications.	<b>06</b>
	c) Write note on Biomechanics.	<b>06</b>

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SUPPLEMENTARY EXAMS 2024