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

Autonomous Institute Affiliated to VTU

## January 2024 Semester End Main Examinations

**Programme: B.E.**

**Branch: Civil Engineering**

**Course Code: 21CV7BSBFE**

**Course: Biology For Engineers**

**Semester: VII**

**Duration: 3 hrs.**

**Max Marks: 100**

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

			<b>UNIT - I</b>		<b>CO</b>	<b>PO</b>	<b>Marks</b>
<b>Important Note:</b> Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.	1	a)	Outline the classification and structure of Carbohydrates. Mention its importance.		CO1	PO 1, 6	<b>10</b>
		b)	Describe in detail about, why vegetable oil rich in polyunsaturated fat is recommended than saturated and trans-fat for persons suffering from cardiovascular diseases.		CO1	PO1, PO6	<b>10</b>
<b>OR</b>							
	2	a)	Interpret about the simple lipid and its biological importance. Discuss the sources and deficiency of Vitamin C and Retinol.		CO1	PO1, PO6	<b>10</b>
		b)	What is Cell and Infer about Characteristics of living organisms?		CO1	PO1, PO6	<b>10</b>
			<b>UNIT - II</b>				
	3	a)	Elaborate on types of reversible enzyme inhibition. Write a note on importance of enzyme in diagnostic		CO2	PO1, PO6	<b>10</b>
		b)	Write a note on active site of an enzyme with reference to lock and key. Discuss about cofactors and coenzyme with examples		CO2	PO1, PO6	<b>10</b>
<b>UNIT - III</b>							
	4	a)	Write a note on Immunoglobulins. Discuss Acquired immunity with an examples.		CO2	PO1, PO6	<b>10</b>
		b)	Define Microbiology. Discuss the contribution of Louis Pasteur in Microbiology and its application of microbes in Industries citing relevant examples.		CO3	PO1, PO6	<b>10</b>
			<b>UNIT - IV</b>				
	5	a)	Describe nanoparticles and its applications in Life sciences.		CO4	PO1, PO6	<b>10</b>

	b)	What are the Characteristics of Biosensors give its applications.	CO4	PO1, PO6	10
		<b>UNIT – V</b>			
6	a)	Define stem cells and its properties and how they are useful.	CO4	PO1, PO6	10
	b)	With Pea plant as an example, explain the law of dominance and segregation.	CO4	PO1, PO6	10
		<b>OR</b>			
7	a)	Elaborate on Neural Network and its applications.	CO4	PO1, PO6	10
	b)	Explain the “Law of Inheritance” by given Mendel’s Principal.	CO4	PO1, PO6	10

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B.M.S.C.E. - ODD SEM 2023-24