U.S.N.										

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

Autonomous Institute Affiliated to VTU

February / March 2023 Semester End Main Examinations

Programme: B.E. **Semester: VII**
Branch: Chemical Engineering **Duration: 90 min**
Course Code: 22CH7BSBFE **Max Marks: 50**
Course: Biology for Engineers **Date: 24.02.2023**

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

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

UNIT - I

1	a)	Distinguish the principal differences between prokaryotic cells and Eukaryotic cells.		**10**

UNIT - II

2	a)	Outline the applications of microbiology.		**05**
	b)	Discuss the mechanism of adoptive immunity.		**05**

OR

3	a)	With a schematic representation, deliberate on how antibodies work in different ways to fight against antigens.		**10**

UNIT - III

4	a)	Demonstrate the structure of Nano shells and their application in fighting against cancer tumours with a schematic representation.		**06**
	b)	What are biosensors? List the applications.		**04**

UNIT - IV

5	a)	Discuss the various types of forces in biomechanics with suitable examples.		**10**

OR

6	a)	With a schematic representation, demonstrate the recombinant DNA technique for genetic recombination.		**06**
	b)	List the applications of genetic engineering.		**04**

UNIT - V

7	a)	What is passaging? with a neat flow chart, demonstrate the trypsinization of adherent cells.		**06**
	b)	Explain any one of the cell culture techniques.		**04**

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