

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

Autonomous Institute Affiliated to VTU

August 2024 Supplementary 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.

UNIT - I

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

OR

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

UNIT - II

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

UNIT - III

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

UNIT - IV

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

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 - V

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

OR

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

SUPPLEMENTARY EXAMS 2024