

Reg. No:

--	--	--	--	--	--	--	--	--	--

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**

(AUTONOMOUS)

**B.Tech III Year I Semester Supplementary Examinations December-2021****BIOLOGY FOR ENGINEERS**

(Civil Engineering)

Time: 3 hours

Max. Marks: 60

**PART-A**

(Answer all the Questions 5 x 2 = 10 Marks)

- |   |   |  |    |
|---|---|--|----|
| 1 | a | What is autotrophs & heterotrophs.                 | 2M |
|   | b | What is meiosis?                                   | 2M |
|   | c | List the two types of lipids and their functions.  | 2M |
|   | d | Draw a neat diagram of DNA double helix structure. | 2M |
|   | e | Define stem cells & their functions.               | 2M |

**PART-B**

(Answer all Five Units 5 x 10 = 50 Marks)

**UNIT-I**

- |   |   |   |    |
|---|---|---|----|
| 2 | a | Classify Kingdom Protista and Kingdom Animalia. | 5M |
|   | b | Define Habitat. Explain Terrestrial Habitat.    | 5M |

**OR**

- |   |   |   |    |
|---|---|---|----|
| 3 | a | Explain Animal Cell with a neat-labeled diagram.                  | 5M |
|   | b | Write short notes on unicellular and Multicellular with examples. | 5M |

**UNIT-II**

- |   |   |  |    |
|---|---|--|----|
| 4 | a | How genetic material passes from Parents to offspring's. | 5M |
|   | b | Describe Complementary Gene Interaction.                 | 5M |

**OR**

- |   |   |                                     |    |
|---|---|-------------------------------------|----|
| 5 | a | Discuss on Gene Mapping.            | 4M |
|   | b | Give an account on Down's syndrome. | 6M |

**UNIT-III**

- |   |   |  |    |
|---|---|--|----|
| 6 | a | Write short notes on Nucleotides.          | 5M |
|   | b | What are the macromolecules and its types? | 5M |

**OR**

- |   |   |   |    |
|---|---|---|----|
| 7 | a | What are carbohydrates? Classify and explain monosaccharides. | 6M |
|   | b | Write notes on functions of proteins.                         | 4M |

**UNIT-IV**

- |   |   |  |    |
|---|---|--|----|
| 8 | a | Define transgenic plants & its applications. | 7M |
|   | b | What are the Purines & Pyrimidines of DNA?   | 3M |

**OR**

- |   |   |  |    |
|---|---|--|----|
| 9 | a | Write an account on proteins as structural elements. | 5M |
|   | b | Explain gene- complementation.                       | 5M |

**UNIT-V**

- |    |   |  |    |
|----|---|--|----|
| 10 | a | Describe the kerbs cycle in detail.                              | 5M |
|    | b | Write a note on sterilization and explain any 3 techniques used. | 5M |

**OR**

- |    |   |  |    |
|----|---|--|----|
| 11 | a | How to prepare culture medium? Explain it in detail. | 8M |
|    | b | What are photo systems?                              | 2M |

\*\*\*END\*\*\*