

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech II Year I Semester Supplementary Examinations August-2021

BIOLOGY FOR ENGINEERS

(Common to CE, EEE, ME & AGE)

Time: 3 hours

Max. Marks: 60

PART-A

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

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|---|---|--|----|
| 1 | a | Define Autotrophs and Heterotrophs. | 2M |
| | b | What is Cell cycle? | 2M |
| | c | List the two types of lipids and their functions. | 2M |
| | d | Write full form of mRNA, rRNA and tRNA and their functions | 2M |
| | e | What is sterilization? | 2M |

PART-B

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

UNIT-I

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|---|---|-----|
| 2 | Define Classification and give a detailed account on three Kingdom classifications. | 10M |
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OR

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| 3 | a | Draw a neat-labeled diagram of Animal Cell. | 4M |
| | b | Explain the functions of different organelle present in the Animal cell. | 6M |

UNIT-II

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| 4 | Explain the Mendelian principles of heredity. | 10 M |
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| 5 | a | Write about Turner's Syndrome. | 5M |
| | b | Describe Phenylketonuria. | 5M |

UNIT-III

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| 6 | a | Summarize different types of RNA and their functions. | 5M |
| | b | Explain Enzyme Nomenclature and Classification | 5M |

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| 7 | a | What are Carbohydrates? Give a detailed classification. | 6M |
| | b | Write about Proteins and their functions. | 4M |

UNIT-IV

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| 8 | a | Write the characteristics of Genetic Code and explain why the Codon is universal. | 6M |
| | b | Write short notes on Proteins as structural elements. | 4M |

OR

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| 9 | a | Define Nucleosome. Illustrate the structure of Nucleosome. | 5M |
| | b | Explain genetic recombination. | 5M |

UNIT-V

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| 10 | Describe Krebs cycle with neat diagram. | 10M |
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OR

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| 11 | What is Microscopy? Explain different types of Microscopy. | 10M |
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END