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

B.Tech II Year II Semester Supplementary Examinations July-2021

BIOLOGY FOR ENGINEERS

(Common to ECE, CSE & CSIT)

Time: 3 hours

Max. Marks: 60

PART-A

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

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|---|---|---|----|
| 1 | a | What are the three domains (Kingdoms) of life? | 2M |
| | b | What is gene mapping? | 2M |
| | c | List different Bio-molecules present in the Cell. | 2M |
| | d | What are the Purines and Pyrimidines present in DNA? | 2M |
| | e | Define 1 st and 2 nd law of Thermodynamics. | 2M |

PART-B

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

UNIT-I

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|---|---|--|----|
| 2 | a | Draw ultra structure of Prokaryotic cell. | 5M |
| | b | Compare the characteristics of Eukaryotic and Prokaryotic Cells. | 5M |

OR

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| 3 | a | Draw neat diagram of Plant Cell. | 5M |
| | b | Write the differences between Plant and Animal Cells. | 5M |

UNIT-II

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| 4 | a | Explain Albinism. | 5M |
| | b | Explain Phenylketonuria. | 5M |

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| 5 | Explain Mendelian law's with neat tables. | 10M |
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UNIT-III

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| 6 | a | Describe the Enzyme nomenclature. | 5M |
| | b | Describe Enzyme kinetics. | 5M |

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| 7 | a | Define Polysaccharides with examples. | 6M |
| | b | Classify Proteins. | 4M |

UNIT-IV

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| 8 | a | Explain the double helical structure of DNA with neat diagram. | 6M |
| | b | What is gene complementation? | 4M |

OR

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| 9 | a | Explain Genetic code and degeneracy of genetic code | 5M |
| | b | Explain in brief experimental evidences for DNA as a genetic material. | 5M |

UNIT-V

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| 10 | a | Short notes on Mechanism of ATP production | 5M |
| | b | Summarize the light dependent reactions of Photosynthesis. | 5M |

OR

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| 11 | Explain different phases in the Bacterial growth curve with neat diagram. | 10M |
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END