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

B.Tech II Year II Semester Supplementary Examinations February-2022

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 | Define taxonomy | 2M |
| | b | What is meant by gene mapping | 2M |
| | c | What are polysaccharides | 2M |
| | d | What are the functions of M-RNA & T-RNA | 2M |
| | e | Define sterilization | 2M |

PART-B

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

UNIT-I

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|-----------|--|---|----|
| 2 | What are model organisms. Give a brief account on any three model organisms. | 10M | |
| OR | | | |
| 3 | a | Write the differences between Plant cell and Animal Cell. | 5M |
| | b | Write short notes on three kingdom classification. | 5M |

UNIT-II

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|-----------|---|--|-----|
| 4 | a | Write short notes on Albinism. | 5M |
| | b | Explain how colour blindness is passed on to children. | 5M |
| OR | | | |
| 5 | What is mitotic cell division? Explain Mitosis with neat diagram. | | 10M |

UNIT-III

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|-----------|---|---|----|
| 6 | a | Illustrate the mechanism of enzyme action with suitable diagrams. | 5M |
| | b | Classify proteins. | 5M |
| OR | | | |
| 7 | a | Write short notes on importance of amino acids. | 5M |
| | b | Explain different types of lipids with examples. | 5M |

UNIT-IV

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|-----------|--|---|-----|
| 8 | a | Write short notes on protein as structural element. | 5M |
| | b | Give the characteristics of genetic codon, why the code is universal. | 5M |
| OR | | | |
| 9 | Illustrate gene-Complementation and Recombination. | | 10M |

UNIT-V

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|-----------|---|--|-----|
| 10 | a | Explain the mechanism of ATP Production. | 4M |
| | b | Describe Krebs cycle. | 6M |
| OR | | | |
| 11 | Explain step-by-step glycolysis process | | 10M |

END