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

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

BIOLOGY FOR ENGINEERS

(Common to EEE, CE, AGE & ME)

Time: 3 hours

Max. Marks: 60

PART-A

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

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|---|---|---------------------------------------|----|----|
| 1 | a | What is cell. | L1 | 2M |
| | b | Write any four functions of proteins. | L2 | 2M |
| | c | Draw the structure of DNA & RNA. | L1 | 2M |
| | d | What is gene mapping? | L2 | 2M |
| | e | What is sterilization? | L1 | 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. | L1 | 5M |
| | b | Write any five differences between Plant cell and Animal cell. | L2 | 5M |

OR

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|---|---|---|----|----|
| 3 | a | Write short notes on unicellular and Multicellular with examples. | L1 | 5M |
| | b | Define Habitat. Explain Terrestrial Habitat. | L2 | 5M |

UNIT-II

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|---|---|--|----|----|
| 4 | a | What are the three Laws of Inheritance proposed by Mendel? | L1 | 5M |
| | b | Give an account on Law of Independent Assortment [Diybrid cross] | L2 | 5M |

OR

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|---|---|--|----|----|
| 5 | a | Give an account on Duplicate Gene Interaction. | L1 | 5M |
| | b | Write short notes on Mitotic cell division. | L2 | 5M |

UNIT-III

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|---|---|---|----|----|
| 6 | a | Define polysaccharides with suitable examples. | L1 | 5M |
| | b | What are lipids? Explain different types of lipids. | L2 | 5M |

OR

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|---|---|--|----|----|
| 7 | a | What are lipids? Classify and explain different types of lipids. | L1 | 5M |
| | b | Describe the enzyme action. | L2 | 5M |

UNIT-IV

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|---|---|---|----|----|
| 8 | a | Explain the Laws of Thermodynamics in biological systems. | L1 | 5M |
| | b | Explain genetic code. | L2 | 5M |

OR

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|---|---|--|----|----|
| 9 | a | Give a brief account on Genetic material of DNA. | L1 | 5M |
| | b | Write short notes on R-DNA duplication. | L2 | 5M |

UNIT-V

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|----|---|--|----|----|
| 10 | a | Explain the glycolysis process in detail. | L1 | 5M |
| | b | Explain the following in brief about photosynthesis process. | L2 | 5M |

OR

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|----|---|---|----|----|
| 11 | a | Write the differences between Exothermic and Endothermic reactions. | L1 | 5M |
| | b | Write notes on Classification of microorganisms. | L2 | 5M |

END