

Q.P.Code: 20CS0522

R20

H.T.No.

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

B.Tech. III Year II Semester Regular & Supplementary Examinations June-2025

ARTIFICIAL INTELLIGENCE
(Computer Science & Engineering)

Time: 3 Hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

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|---|---|--|-----|----|----|
| 1 | a | Define Artificial Intelligence and identify the Strong, Weak AI. | CO1 | L1 | 6M |
| | b | Explain in Detail various Types of Knowledge. | CO1 | L2 | 6M |

OR

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|---|---|---|-----|----|----|
| 2 | a | Define Agent and explain its types. | CO1 | L1 | 6M |
| | b | Difference between Forward Chaining and Backward Chaining . | CO1 | L2 | 6M |

UNIT-II

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|---|---|---|-----|----|----|
| 3 | a | Design game tree using Mini-Max Algorithm. | CO4 | L6 | 6M |
| | b | Discuss in detail various Heuristic Search types with suitable example. | CO4 | L2 | 6M |

OR

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|---|---|--|-----|----|----|
| 4 | a | Discuss about A* search. | CO4 | L2 | 6M |
| | b | Design and Solve Vacuum Cleaner toy problem in AI. | CO2 | L6 | 6M |

UNIT-III

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|---|---|---|-----|----|----|
| 5 | a | Explain the inference process in First order logic. | CO3 | L1 | 6M |
| | b | Explain resolution in predicate logic. | CO3 | L2 | 6M |

OR

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|---|---|--|-----|----|----|
| 6 | a | Discuss the Bayes rule inference. | CO3 | L5 | 6M |
| | b | Explain Various levels of knowledge-based agent. | CO3 | L2 | 6M |

UNIT-IV

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|---|---|---|-----|----|----|
| 7 | a | Explain the various forms of Learning Types? | CO5 | L2 | 6M |
| | b | Analyze the Linear Regression in Supervised Learning. | CO5 | L4 | 6M |

OR

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|---|---|--|-----|----|----|
| 8 | a | Discuss in detail about Reinforcement learning. | CO5 | L1 | 6M |
| | b | Explain about Evaluating And Choosing The Best Hypothesis. | CO5 | L2 | 6M |

UNIT-V

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|---|---|--|-----|----|----|
| 9 | a | Explain Components of Expert Systems in detail. | CO5 | L2 | 6M |
| | b | List out the Applications of Expert System and Explain them. | CO5 | L1 | 6M |

OR

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|----|---|---|-----|----|----|
| 10 | a | Describe the phases of developing an Expert system. | CO6 | L2 | 6M |
| | b | List out the Benefits of Expert Systems. | CO5 | L1 | 6M |

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