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

B.Tech III Year II Semester Supplementary Examinations May/June-2024
ARTIFICIAL INTELLIGENCE & MACHINE LEARNING

(Common to CSE & CSIT)

Time: 3 Hours

Max. Marks: 60

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

UNIT-I

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|---|---|-----|----|----|
| 1 | a Illustrate various characteristics of Intelligent agents. | CO1 | L3 | 6M |
| | b Explain Foundations of Artificial Intelligence. | CO1 | L4 | 6M |

OR

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|---|---|-----|----|----|
| 2 | a Discuss about agents and various Properties of environment. | CO1 | L2 | 6M |
| | b Explain in detail about structure of Intelligent agents. | CO1 | L3 | 6M |

UNIT-II

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|---|--|-----|----|----|
| 3 | a Identify and explain in detail about optimization problems. | CO2 | L4 | 6M |
| | b Demonstrate the process of simulated annealing with example. | CO2 | L2 | 6M |

OR

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|---|---|-----|----|----|
| 4 | a Explain A* Algorithm finds a shortest distance between Source and Goal state. | CO2 | L3 | 6M |
| | b Describe the process of simulated annealing with example. | CO2 | L2 | 6M |

UNIT-III

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|---|---|-----|----|----|
| 5 | a Explain the various types of Machine Learning techniques. | CO3 | L2 | 6M |
| | b List out an applications of Machine Learning. | CO3 | L4 | 6M |

OR

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|---|--|-----|----|----|
| 6 | a Describe classification techniques in supervised learning with an example. | CO3 | L2 | 6M |
| | b Compare Univariate and Multivariate Decision Trees. | CO3 | L3 | 6M |

UNIT-IV

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|---|---|-----|----|----|
| 7 | a Analyze the maximization algorithm with simple example. | CO4 | L4 | 6M |
| | b List out the various unsupervised learning techniques. | CO4 | L2 | 6M |

OR

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|---|--|-----|----|----|
| 8 | a How can we make k-means robust to outliers? Explain | CO4 | L3 | 6M |
| | b Illustrate in detail about multidimensional scaling. | CO4 | L2 | 6M |

UNIT-V

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|---|--|-----|----|----|
| 9 | a Illustrate Condensed Nearest Neighbor in reinforcement learning. | CO5 | L4 | 6M |
| | b Explain Generalization process in Temporal difference Learning . | CO5 | L3 | 6M |

OR

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|----|--|-----|----|----|
| 10 | a List and explain in detail about elements of reinforcement learning. | CO5 | L3 | 6M |
| | b State and explain non parametric density estimation. | CO5 | L2 | 6M |

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