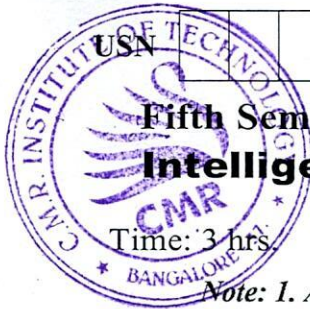


CBCS SCHEME



BEC515A

Fifth Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025 Intelligent Systems and Machine Learning Algorithms

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.*

| Module – 1 | | | M | L | C |
|------------|----|---|----|----|-----|
| Q.1 | a. | Explain the history of AI. | 10 | L2 | CO1 |
| | b. | Define AI. Explain the foundation of AI in detail. | 10 | L2 | CO1 |
| OR | | | | | |
| Q.2 | a. | Explain properties of task environment. | 10 | L2 | CO1 |
| | b. | Differentiate between simplex reflex agents and model based reflex agents. | 10 | L2 | CO1 |
| Module – 2 | | | | | |
| Q.3 | a. | List and explain the components required to define a problem. | 10 | L2 | CO2 |
| | b. | Explain goal formulation and problem formulation with examples. | 10 | L2 | CO2 |
| OR | | | | | |
| Q.4 | a. | Explain Breadth First Search and Depth First Search algorithms with an example. | 10 | L3 | CO2 |
| | b. | Illustrate different methods of evaluating an algorithm's performance. | 10 | L2 | CO2 |
| Module – 3 | | | | | |
| Q.5 | a. | Describe greedy best first search as an informed search strategy. | 10 | L2 | CO2 |
| | b. | Explain knowledge based agent with a generic knowledge based agent program. | 10 | L2 | CO3 |
| OR | | | | | |
| Q.6 | a. | Describe syntax and semantics with respect to propositional logic. | 10 | L2 | CO3 |
| | b. | Explain Wumpus World with respect to artificial intelligence. | 10 | L2 | CO3 |
| Module – 4 | | | | | |
| Q.7 | a. | What is Machine Learning? Explain with specific examples. | 06 | L2 | CO4 |
| | b. | Explain perspectives and issues in Machine Learning. | 04 | L2 | CO4 |
| | c. | Explain types of Machine Learning System. | 10 | L2 | CO4 |
| OR | | | | | |
| Q.8 | a. | Describe the main challenges of Machine Learning. | 10 | L2 | CO4 |
| | b. | Explain: (i) Find S algorithm (ii) Candidate elimination algorithm | 10 | L2 | CO4 |
| Module – 5 | | | | | |
| Q.9 | a. | Explain working with Real data and Get the data. | 10 | L2 | CO5 |
| | b. | Write a note on Launch, Monitor and Maintain your system. | 10 | L2 | CO5 |
| OR | | | | | |
| Q.10 | a. | Describe the steps involved in preparing the data for machine learning model. | 10 | L2 | CO5 |
| | b. | Explain MNIST with respect to Machine Learning. | 10 | L2 | CO5 |

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