

Fifth Semester B.E./B.Tech. Degree Examination, June/July 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. VTU Formula Hand Book is permitted.

3. M: Marks, L: Bloom's level, C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Elaborate on different definitions of artificial intelligence with suitable example.	10	L2	CO1
	b.	Illustrate by considering at least four foundations of artificial intelligence.	10	L2	CO1
OR					
Q.2	a.	Classify properties of task environment with an example.	10	L2	CO1
	b.	Draw and categorize the learning agent with its components.	10	L2	CO1
Module – 2					
Q.3	a.	Discuss the concept of well-defined problems and solutions and also formulating problems.	10	L2	CO2
	b.	Distinguish between toy problem and real world problem by considering any one example.	10	L2	CO2
OR					
Q.4	a.	Summarize infrastructure for search algorithms with relevant figure.	10	L2	CO2
	b.	Explain Iterative deepening depth-first search strategy with relevant figure.	10	L2	CO2
Module – 3					
Q.5	a.	Illustrate greedy best – first search with an example.	10	L2	CO3
	b.	Develop an environment of wumpus world to show knowledge based agents are worth.	10	L3	CO3
OR					
Q.6	a.	Illustrate the concept of A* search with an example.	10	L2	CO3
	b.	Classify a simple and powerful propositional logic with suitable example.	10	L2	CO3
Module – 4					
Q.7	a.	Explain briefly why to use machine learning.	10	L2	CO4
	b.	Discuss A concept learning task by considering the example of enjoy sport task.	10	L2	CO4
OR					
Q.8	a.	Outline types of machine learning systems.	10	L2	CO4
	b.	Explain the steps in summary which are involved in machine learning system.	10	L2	CO4
Module – 5					
Q.9	a.	Illustrate the concept of “look at the big picture”.	10	L2	CO5
	b.	Illustrate multi output classification and multi label classification.	10	L2	CO5
OR					
Q.10	a.	Illustrate the concept of MNIST.	10	L2	CO5
	b.	Make use of visualizing geographical data and explain.	10	L2	CO5