Roll No. | | | | | | | | | | | | |

Total No. of Pages: 01

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B.Sc (Cyber Security) (Sem.- 6)

MACHINE LEARNING

Subject Code: UGCA-1950

M.Code: 94316

Date of Examination: 21-11-2025

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B consists of SIX questions, each carrying TEN marks each and student has to attempt any FOUR questions.

Q. No.	Question	Course Outcome	Bloom's Level
	SECTION-A		
1	Answer briefly:		
a.	Mention some common use cases of Machine Learning.	CO1	L2
b.	Define Machine Learning.	CO1	L1
c.	Explain the purpose of gradient descent in regression.	CO3	L2
d.	Explain the working principle of Decision Tree.	CO2	L2
e.	Comparison between Grid Search and Random Search.	CO4	L2
f.	What are the main use cases of clustering?	CO2	L1
g.	Define similarity and dissimilarity measures in clustering.	CO4	L1
h.	Define the concept of Exploration vs. Exploitation.	CO5	L1
i.	Differentiate between Q-values and V-values.	CO5	L2
j.	What are the advantages of K-Means algorithm?	CO3	L1
	SECTION-B		
2	Identify the categories of Machine Learning with examples.	CO1	L3
3	Discuss the Machine Learning process flow in detail with a neat diagram.	CO2	L6
4	Examine the steps for implementing Naïve Bayes Classifier with an example.	CO3	L4
5	Compare K-Means, C-Means, and Hierarchical Clustering techniques.	CO3	L4
6	Explain the basic concepts and elements of Reinforcement Learning.	CO4	L5
7	Evaluate the importance of Markov Decision Process (MDP) in Reinforcement Learning.	CO5	L5

Note: Disclosure of Identify by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the students.