

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION Jan-Jun 2024

B.Tech-VI Semester (CSE/IT)

COURSE CODE (CREDITS): 18B1WCI634 (2)

MAX. MARKS: 15

COURSE NAME: Machine Learning

COURSE INSTRUCTORS: Praveen Modi, Dr. Aman Sharma, Dr. Shubham Goel MAX. TIME: 1:00Hr

Note: All questions are compulsory. Marks are indicated against each question in square brackets. Write the answer of the question belonging to the same part in the same order.

Q1. What do you understand by under-fitting and over-fitting? How to overcome? [2] (CO1)

Q2. What is an attribute? Fill the following table for which it is applicable? [2] (CO1)

Attribute Type	Mean	Median	Mode
Nominal			
Binary			
Ordinal			
Interval-Scale			

Q3. Construct the Decision Tree using Id-3 algorithm for following dataset with class labelled is Job – Offered? [5] (CO2)

CGPA	Communication	Aptitude	Programming	Job- Offered
High	Good	High	Good	Yes
Medium	Good	High	Good	Yes
Low	Bad	Low	Good	No
Low	Good	Low	Bad	No
High	Good	High	Bad	Yes
High	Good	High	Good	Yes
Medium	Bad	Low	Bad	No
Medium	Bad	Low	Good	No
High	Bad	High	Good	Yes
Medium	Good	High	Good	Yes
Low	Bad	High	Bad	No
Low	Bad	High	Bad	No
Medium	Good	High	Bad	Yes
Low	Good	Low	Good	No
High	Bad	Low	Bad	No

Q4. Write at least four major points to make the comparison between supervised, unsupervised and Reinforcement Learning System? [2](CO1)

Q5. Calculate the Sensitivity and Specificity, Accuracy, and F1-Score for following confusion matrix of binary classification problem? [4] (CO2)

		Predicted Class	
		Win	Loss
Actual Class	Win	85	2
	Loss	4	9