

## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -2 EXAMINATION- OCTOBER 2018

M.Tech. I &amp; III Semester

COURSE CODE: 13M1WCI331

MAX. MARKS: 25

COURSE NAME: Machine Learning

COURSE CREDITS: 03

MAX. TIME: 1Hr. 30 Minutes

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

1. What is the difference between classification and prediction? Explain with suitable example. [3]

2. (i) "Iterative Dichotomizer-3 doesn't perform well on datasets with continuous attribute" (ii) "Discretization reduces the time taken by machine learning algorithm for future prediction" Justify the above statements with suitable reasoning, example and diagram. [5]

3. Consider the weather data set given below:

Outlook	Temperature	Humidity	Windy	Play
Sunny	Hot	High	False	No
Sunny	Hot	High	True	No
Overcast	Hot	High	False	Yes
Rainy	Mild	High	False	Yes
Rainy	Cool	Normal	False	Yes
Rainy	Cool	Normal	True	No
Overcast	Cool	Normal	True	Yes
Sunny	Mild	High	False	No
Sunny	Cool	Normal	False	Yes
Rainy	Mild	Normal	False	Yes
Sunny	Mild	Normal	True	Yes
Overcast	Mild	High	True	Yes
Overcast	Hot	Normal	False	Yes
Rainy	Mild	High	True	No

Table 1: Weather Data Set

Make a classification model using ID-3 decision tree approach to predict whether the game will be played or not on a particular day. [12]

4. Explain the significance of method of least square in prediction with suitable example. Draw the expressions for linear and non linear single and multiple regression methods. [5]