(Please write your Enrollment Number) Enrollment No. 01704092023

MID-TERM EXAMINATION
(Course Name : MCA) (Semester : Second Semester)
(March, 2024) OFF LINE mode

Subject Code: MCA-104	Subject: Machine Learning
Time : 1 ½Hours	Maximum Marks : 30
Note: Q. 1 is compulsory.	

Q1		(2.5*4)	
	(a) Explain Types of Machine Learning with example.	UNIT-1	
	(b) Differentiate between Overfitting and Underfitting.	UNIT-1	
	(c) Differentiate between Regression and Classification.	UNIT-2	
	(d) Explain basic components of Perceptron with the help of schematic diagram.	UNIT-2	

Q2 **(Attempt any Two Parts) UNIT-1** **(5,5)**

(a) Explain the Machine Learning Process in detail with example.

(b) Explain three methods of Supervised Feature Selection techniques with diagram.

(C) Consider a Machine Learning model predicting weakness of monsters with below mentioned confusion matrix. Calculate the following using confusion matrix:

i. Accuracy of the model.
ii. Precision of predicting a monster was weak against fire.
iii. Recall to predict monsters who are actually weak against wind.

Confusion Matrix		Actual weakness		
		Fire	Water	Wind
Predicted Weakness	Fire	21	6	3
	Water	3	28	9
	Wind	5	1	24

Q3 **(Attempt any Two Parts) UNIT-2** **(5,5)**

(a) Define Perceptron. Also write the Perceptron function and algorithm.

(b) Differentiate between Linear Regression and Logistic Regression along with diagrams.

(C) Explain the working of Navie Bayes Classifier with an example.