



GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Fifth Semester) Regular Examinations, December – 2023

21BCMPC35001 – Advanced Machine Learning

(CSE-AIML)

Time: 3 hrs

Maximum: 70 Marks

Answer all questions

(The figures in the right hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

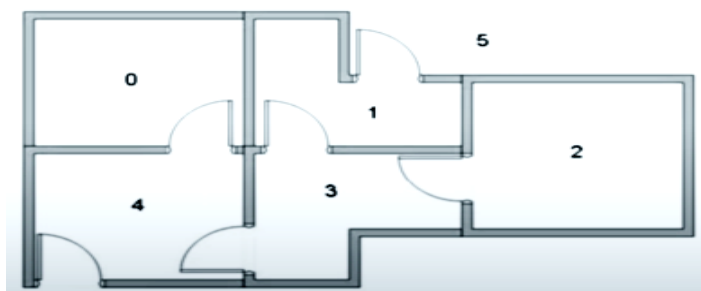
	CO #	Blooms Level
a. Differentiate between Artificial intelligence and Machine learning.	CO1	K2
b. Illustrate importance of learning rate in neural network.	CO1	K3
c. Explain the term information gain in decision tree.	CO2	K2
d. Name the standard ensemble techniques.	CO3	K2
e. Explain F-Measure and exemplify the need.	CO4	K4

PART – B

(15 x 4=60 Marks)

Answer **ALL** questions

	Marks	CO #	Blooms Level
2. a. Categorize the machine learning with hierarchical diagram.	8	CO1	K2
b. Explain the types of activation function with pros and cons.	7	CO1	K4
(OR)			
c. Explain the different types of neural network architecture.	8	CO1	K2
d. Compare between Lasso and Ridge Regression.	7	CO1	K4
3.a. Explain KNN algorithm with appropriate scatter plot.	8	CO2	K3
b. Explain the term regression. Compare linear and logistic regression.	7	CO2	K4
(OR)			
c. Explain the random Forest Algorithm and brief about its ensemble technique.	8	CO2	K3
d. Explain the term regression. Compare between univariate and multivariate regression.	7	CO2	K4
4.a. How clustering different from classification and explain any two clustering types?	8	CO2	K3
b. Find the optimum path diagram using Q-Learning.	7	CO3	K4
[Note: 100 reward]			



(OR)

- c. Explain the DBScan Clustering algorithm and its pros & cons. 8 CO2 K3
- d. Calculating the Gini Index for past trend 7 CO3 K4

<i>Past Trend</i>	<i>Open Interest</i>	<i>Trading Volume</i>	<i>Return</i>
Positive	Low	High	Up
Negative	High	Low	Down
Positive	Low	High	Up
Positive	High	High	Up
Negative	Low	High	Down
Positive	Low	Low	Down
Negative	High	High	Down
Negative	Low	High	Down
Positive	Low	Low	Down
Positive	High	High	Up

- 5.a. Explain the performance evolution of process of classification with pros and cons. 8 CO4 K3
- b. Calculate different performance based on following confusion matrix 7 CO4 K4

N=175	Predicted: Yes	Predicted: No
Actual: Yes	100	10
Actual: No	15	50

(OR)

- c. Explain the performance evolution of process of regression with pros and cons. 8 CO4 K3
- d. Calculate different performance based on following data: 7 CO4 K4
- Target = [1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0]
- predicted = [1.0, 0.9, 0.8, 0.7, 0.6, 0.5, 0.4, 0.3, 0.2, 0.1, 0.0]

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