GALGOTIAS UNIVERSITY

ADMISSION NUMBER

School of Computing Science and Engineering

Bachelor of Technology in Computer Science and Engineering
Semester End Examination - Jun 2024

Duration : 180 Minutes
Max Marks : 100

Sem IV - R1UC402T - E2UH401B - Data Analytics

General Instructions
Answer to the specific question asked
Draw neat, labelled diagrams wherever necessary
Approved data hand books are allowed subject to verification by the Invigilator

1)	List the categories of clustering methods.	K1(2)
2)	Mention the differences between Data Mining and Data Profiling?	K2(4)
3)	Consider the two dimensional patterns (2, 1), (3, 5), (4, 3), (5, 6), (6, 7), (7, 8).Compute the principal component using PCA Algorithm.	K2(6)
4)	A medical company touts its new test for a certain genetic disorder. The false negative rate is small: if you have the disorder, the probability that the test returns a positive result is 0.999. The false positive rate is also small: if you do not have the disorder, the probability that the test returns a positive result is only 0.005. Assume that 2% of the population has the disorder. If a person chosen uniformly from the population is tested and the result comes back positive, what is the probability that the person has the disorder?	K3(9)
5)	Discuss how a model's performance changes with variations in the threshold for classification.	K3(9)
6)	Differentiate between supervised learning and unsupervised learning.	K5(10)
7)	Explain the concept of Estimating Moments	K4(12)
8)	Given a 3-layer network with input [1, -1], weights [0.5, -0.5; 0.4, 0.4], [0.3, -0.3], calculate the output with ReLU activation. Explain ReLu function in detail.	K5(15)
9)	Construct a fuzzy logic model to predict the temperature (Low, Medium, High) from input conditions. Given inputs Crisp: 15°C, define the output.	K5(15)
10)	Explain in detail about Naïve Bayes Classification.	K6(18)