

II-Mid Semester Exam May- 2025
Branch: CSE/AL Semester: IV
LNCS/AL-404 Machine Learning and Pattern Recognition

Time 1:30 Hrs

Max. Marks 20

Note: All questions are compulsory and have internal choice.

Ques.1: Explain the concept of linear regression with an example. How do we estimate the coefficients in simple linear regression. **(CO3 7 Marks)**

OR

What is multiple linear regression? Write the steps to compute multiple regression coefficients.

Ques.2: Describe logistic regression How is it used for binary classification? **(CO4 7 Marks)**

OR

Explain how to make predictions using a logistic regression model.
Give a simple example.

Ques. 3: What is Linear Discriminant Analysis (LDA)?
Explain LDA for $p = 1$ with a diagram. **(CO5 6 Marks)**

OR

What is the Bayes theorem for classification? Write a short note on quadratic discriminant analysis.