

CBCS SCHEME

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21AI743

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2025

Predictive Analytics

Time: 3 hrs

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Define Predictive Analytics. Explain the applications of predictive analytics in detail. (10 Marks)
- b. Explain Business Analytics with different types. (10 Marks)

OR

- 2 a. Explain analytical techniques which broadly grouped in to regression technology & Machine learning technology. (10 Marks)
- b. Explain propensity models with different example. (10 Marks)

Module-2

- 3 a. Explain Statistical Model Technique. (10 Marks)
- b. Explain Statistical Model in Machine learning. (10 Marks)

OR

- 4 a. Explain Empirical Bayes Method. (10 Marks)
- b. Explain Point Estimation with Accident rate example. (10 Marks)

Module-3

- 5 a. Explain data transformations to resolve skewness. (10 Marks)
- b. Explain data transformations to resolve outline & data reduction and feature extraction. (10 Marks)

OR

- 6 a. Explain the problem of over fitting and Model Tuning ? (10 Marks)
- b. Explain data splitting method & Resampling techniques in data transformation. (10 Marks)

Module-4

- 7 a. Explain Quantitative measure of performance and variance – Bias Trade off in regression model. (10 Marks)
- b. Explain PLS (Partial Least Square) in regression model. (10 Marks)

OR

- 8 a. Explain SVM & KNN in non-linear regression models. (10 Marks)
- b. Explain Basic Regression Trees & Rule Based Models in Regression Trees. (10 Marks)

Module-5

- 9 a. Explain well – calibrated probabilities in class predictions. (10 Marks)
- b. Explain LDA (Linear Discriminant Analysis) in classification models. (10 Marks)

OR

- 10 a. Explain Nonlinear Discriminant Analysis. (10 Marks)
- b. Explain Bagged Trees & Random Forest in classification model. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8=50, will be treated as malpractice.