



CBCS SCHEME

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21AI743

Seventh Semester B.E./B.Tech. Degree Examination, June/July 2026 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 into regression and machine learning techniques. (10 Marks)
- b. Explain propensity models with different example. (10 Marks)

Module-2

- 3 a. Explain Statistical Model Techniques. (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 decedent rate example. (10 Marks)

Module-3

- 5 a. Explain Data Transformations to resolve skewness. (10 Marks)
- b. Explain data transformation to resolve outliers and data reduction and features extraction. (10 Marks)

OR

- 6 a. Explain the problem of overfitting and model tuning. (10 Marks)
- b. Explain data splitting method and resampling technique 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 and KNN in non-linear regression models. (10 Marks)
- b. Explain Basic Regression tree and rule based models in regression trees. (10 Marks)

Module-5

- 9 a. Explain well calibrated probability class predictions. (10 Marks)
- b. Explain LDA in classification Model. (10 Marks)

OR

- 10 a. Explain non-linear discriminant analysis. (10 Marks)
- b. Explain Bagged trees and Random forest in classification model. (10 Marks)
