



R20 Regulation

Subject code:3E7EG

TKR COLLEGE OF ENGINEERING AND TECHNOLOGY

(Autonomous, Accredited by NAAC with 'A+' Grade)

B.Tech VII Semester Supplementary Examinations, November 2025

**PREDICTIVE ANALYTICS
(CSE)**

Maximum Marks: 70

Date:28.11.2025

Duration: 3 hours

- Note: 1.This question paper contains two parts A and B.
 2. Part A is compulsory which carries 20 marks. Answer all questions in Part A.
 3. Part B consists of 5 Units. Answer any one full question from each unit.
 4. Each question carries 10 marks and may have a, b, c, d as sub questions.

Part-A

All the following questions carry equal marks (10X2M=20 Marks)		Marks	CO	BTL
1	How do you handle missing data in predictive modeling	2M	1	L1
2	What is the significance of data preprocessing in predictive analytics?	2M	1	L1
3	How do you handle multi-collinearity in logistic regression models?	2M	2	L1
4	What is an ensemble method?	2M	2	L1
5	What is the significance of NOS 905?	2M	3	L1
6	What is pruning?	2M	3	L1
7	What are some commonly used metrics to measure the accuracy of time series forecasts?	2M	4	L1
8	What is the purpose of feature extraction in time series analysis?	2M	4	L1
9	How can employees access and contribute to a corporate knowledge base effectively?	2M	5	L1
10	Why is peer review important in the document creation?	2M	5	L1

Part-B

Answer All the following questions. (5X10M=50Marks)		Marks	CO	BTL
11	a) Explain the tools and environments commonly used in predictive analytics, and how do they facilitate the modeling process?	6M	1	L2
	b) What are missing imputations in predictive modeling	4M		
OR				
12	a) Explain the significance of business modeling. How does it help businesses make informed decisions and optimize their operations?	6M	1	L2
	b) Discuss the Blue property in the context of linear regression.	4M		
13	a) In logistic regression, what are some of the commonly used model fit statistics, and how are they interpreted to assess the model's performance?	6M	2	L2
	b) What is the role of deviance and AIC (Akaike Information Criterion) in evaluating the goodness of fit in logistic regression models?	4M		
OR				
14	Compare and contrast supervised learning and unsupervised learning techniques in terms of their goals, applications, and methodologies.	10M	2	L2

15	a) Explain the fundamental differences between regression and segmentation in supervised learning b) What is overfitting? How does it affect decision trees?	6M 4M	3	L2
OR				
16	a) Explain the importance of record-keeping in HR management? b) How can NOS 905 benefit both employers and employees in terms of career development, skill recognition, and industry standards?	5M 5M	3	L2
17	Describe the ARIMA model and its components, including Autoregressive (AR), Integrated (I), and Moving Average (MA) terms.	10M	4	L2
OR				
18	Describe the typical steps involved in a time series forecasting project, from data collection and preprocessing to model selection and evaluation.	10M	4	L2
19	a) How do well-defined Standard Operating Procedures (SOPs) help in maintaining consistency and quality in document creation and knowledge sharing processes within an organization? b) What are some best practices for maintaining a consistent style and format throughout documents to uphold professionalism and readability?	5M 5M	5	L2
OR				
20	a) Discuss about the intellectual property protection strategies that organizations commonly employ? b) Discuss about the importance of respecting intellectual property and copyright laws in document creation and knowledge sharing. How can organizations navigate these legal considerations effectively?	5M 5M	5	L2