

- b) Explain the role of machine learning in healthcare and insurance applications. *13,K2,CO1*
12. a) Elaborate the following models with necessary examples *13,K2,CO2*
 a) Descriptive model.
 b) Predictive model.
 c) Prescriptive model.
- OR**
- b) (i) Discuss about quality of data and its remediation. *6,K2,CO2*
 (ii) Give brief account on methods to improve the performance of the model. *7,K2,CO2*
13. a) How can you perform classification with support vector machine algorithm? Explain the decision boundary construction with an example. *13,K2,CO3*
- OR**
- b) What is feature engineering? Elaborate on feature construction and feature extraction. *13,K2,CO3*
14. a) (i) Derive the mathematical model for simple linear regression. *6,K3,CO4*
 (ii) Give brief account on ridge regression. *7,K2,CO4*
- OR**
- b) (i) Explain the process of maximum likelihood estimation. *7,K2,CO4*
 (ii) Elaborate on multiple linear regression. *6,K2,CO4*
15. a) (i) Explain K-medoid clustering method with an example. *7,K2,CO5*
 (ii) Write shorts notes on representation learning. *6,K2,CO5*
- OR**
- b) Explain association rule learning with Apriori algorithm. *13,K2,CO6*

PART - C (1 × 15 = 15 Marks)

16. a) Describe about hierarchical clustering method with an example. *15,K3,CO5*
- OR**
- b) Write and explain the K-Nearest neighbor classification algorithm with an example. *15,K3,CO3*