



Reg. No:

--	--	--	--	--	--	--

SNS College of Technology, Coimbatore-35.

(Autonomous)

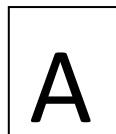
Internal Assessment - II

Academic Year 2023-2024 (Even)

Second Semester

Department of Management Studies

23BAT615 – Artificial Intelligence for Managers



Time: 1 ½ Hours

Maximum Marks: 50

Answer all the questions

CO Level

PART A – (5*2 Marks = 10 Marks)

- | | | | |
|----|--|------|-----|
| 1. | Interpret the primary purpose of using ensemble technique in Machine Learning. | CO 2 | R |
| 2. | How can machine learning be applied in marketing analytics? | CO 2 | An |
| 3. | How can decision trees assist in segmenting customers for targeted marketing? | CO 3 | An |
| 4. | Analyze in what ways can NLP enhance customer service in businesses? | CO 3 | An |
| 5. | How can linear regression be applied in predicting sales for a business? | CO 3 | APP |

PART B

(2*13 Marks = 26 Marks & 1*14 Marks 14 Marks)

- | | | | |
|----|---|------|---|
| 6. | a) Discuss the design and implementation of a recommendation system for an e-commerce platform. Include different approaches (collaborative filtering, content-based filtering, and hybrid methods), data requirements, and evaluation metrics. | CO 2 | U |
| | or | | |
| | b) Explain the concept of reinforcement learning and its application in business. Provide an example of how reinforcement learning can be used to optimize supply chain operations, | CO 2 | R |

detailing the state, action, reward, and policy elements.

- | | | | |
|----|---|------|-----|
| 7. | a) A company wants to predict its future sales based on advertising expenditure. Explain the steps you would take to build a linear regression model to predict sales. Include data preprocessing, model training, and evaluation. | CO 3 | An |
| | or | | |
| | b) Describe how you would apply logistic regression to predict whether a customer will buy a product (binary outcome). Include how you would handle categorical variables and imbalanced datasets. | CO 3 | App |
| 8. | a) Design a recommendation system for a streaming service (like Netflix or Spotify). Discuss the choice of recommendation algorithm (collaborative filtering, content-based, or hybrid), how you would gather and preprocess data, and the metrics you would use to measure the system's effectiveness also include considerations for personalization and user experience. | CO 2 | An |
| | or | | |
| | b) A healthcare organization wants to predict patient outcomes based on medical history and clinical data. Design a plan for applying a random forest algorithm to develop a predictive model. Discuss data preprocessing, ensemble model training, hyperparameter tuning, and model evaluation techniques. | CO 3 | An |

*Abbreviations: CO: Course Outcome, R: Remember, U: Understand, APP: Apply, An: Analyze, E: Evaluate, C: Create
