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(FOR THE CANDIDATES ADMITTED

23UDA6E4

DURING THE ACADEMIC YEAR 2023

ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS): POLLACHI

END-OF-SEMESTER EXAMINATIONS: MAY 2026

B.Sc. CS with DA

MAXIMUM MARKS: 75

SEMESTER VI

TIME: 3 HOURS

PART - III

23UDA6E4 - MACHINE LEARNING ALGORITHMS

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

(K1)

1. Which of the following is not a supervised machine learning algorithm?
a) K-means b) Naïve Bayes c) SVM for classification problems d) Decision tree
2. In the context of linear regression, what is the purpose of feature scaling?
a) to improve model interpretability b) to handle multicollinearity
c) to speed up the training process d) to make coefficients comparable
3. What is the role of the hyperplane in SVM?
a) Separate data points b) Minimize loss c) Perform clustering d) Normalize data
4. What is the goal of a decision tree algorithm during training?
a) to maximize accuracy b) to minimize error
c) to minimize impurity d) to maximize precision
5. What is the main challenge/s of NLP?
a) Handling Ambiguity of Sentences b) Handling Tokenization
c) Handling POS-Tagging d) All of the mentioned

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. What is Feature Selection in Machine Learning?
7. What is Linear Regression?
8. What are the types of Naïve Bayes classifiers?
9. What is the difference between supervised and unsupervised learning?
10. What is the Bag of Words (BoW) model?

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a) Discuss the categories of machine learning algorithm.

(OR)

- b) Examine how to create training and test sets.

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(CONTD 2)

12. a) Write a short note on linear models and a bidimensional example.
(OR)
b) Showcase the Logistic regression in brief.
13. a) Construct Naïve Bayes classifiers.
(OR)
b) Explain support vector regression.
14. a) Examine Binary decision tree.
(OR)
b) Summarize the K-means Clustering.
15. a) Write a short note about Naïve User based system.
(OR)
b) Explain the Sentence Tokenizing and Word Tokenizing.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.****(K4 (Or) K5)**

16. a) Explain the important elements of Machine Learning.
(OR)
b) Examine the feature selection and filtering.
17. a) Explain Evaluation Metrics for Regression Model.
(OR)
b) Discuss Classification metrics in logistic regression.
18. a) Develop Naïve Bayes in scikit-learn.
(OR)
b) Evaluate scikit-learn implementation.
19. a) Explain Ensemble learning.
(OR)
b) Explain Hierarchical clustering.
20. a) Investigate Model free collaborative filtering.
(OR)
b) Briefly explain the Machine Learning Architecture.

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