21U5117 (Pages: 2) Name: .....

Reg.No: .....

FIFTH SEMESTER B.Voc. DEGREE EXAMINATION, NOVEMBER 2023

(CBCSS - UG)

CC21U SDC5 ML18 - MACHINE LEARNING USING PYTHON

(Information Technology)

(2021 Admission - Regular)

Time : 2.00 Hours Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 2 marks.

1. How is Data Science different from Big Data and Data Analytics?
2. What is Cross-Validation?
3. What is Dimensionality Reduction?
4. What are features?
5. Define Nearest neighbor classification.
6. Compare K-means and KNN algoithms.
7. What is classification?
8. What are the three approaches used in sentiment analysis?
9. What are the advantages of using a naive Bayes for classification?
10. What do you understand by L1 and L2 regularization?
11. What do you mean by Association rule mining(ARM)?
12. In what areas Pattern Recognition is used?

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

Answer ***all*** questions. Each question carries 5 marks.

13. Explain about SciPy.
14. Explain Principal Component Analysis (PCA).
15. Implement feature extraction from text document.
16. What is Bias, Variance and what do you mean by Bias-Variance Tradeoff?
17. Implement the Logistic regression algorithm.

18. What is multidimensional regression? Write the python code of multidimensional regression.

19. What Is Image Processing? What are the types of image processing?

(Ceiling: 30 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

20. What are the Applications of Machine Learning in Modern Businesses?

21. Explain the K Nearest Neighbor Algorithm with example.

(1 × 10 = 10 Marks)

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