Code:4011/BL/20

Faculty of Science

B.Sc (Data Science) II-Year, CBCS –IV Semester Backlog Examinations –Jan, 2023

PAPER: Machine Learning

Time: 3 Hours   Max Marks: 80

Section-A

I. Answer any *eight* of the following questions   (8x4=32 Marks)

1. Why Machine Learning is important?
2. Define Inductive bias.
3. Define K-mean Clustering.
4. Explain Improved Generalization.
5. Write the importance of Good Features
6. What is Cross Validation?
7. Write in short about Neural Network.
8. Write about Basis Functions.
9. What are the Multilayered Networks?
10. Define Unsupervised Learning.
11. What is Clustering?
12. What are the Association Rules?

Section-B

II. Answer the following questions   (4x12=48 Marks)

13.(a) Illustrate the Basic Decision Tree Algorithm with an example.

(OR)

(b) Write the differences between
i) Training Data and Testing Data   ii). Under fitting and Over fitting

14.(a) What is Weight Regularization? Discuss in detail.

(OR)

(b)Explain the Perceptron Algorithm? What are the Limitations of Perceptron?

15.(a)Explain various approaches of Probabilistic Modeling.

(OR)

(b) Explain Back-Propagation Algorithm.

16.(a) Explain Agglomerative Algorithm.

(OR)

(b) Explain Apriori Algorithm.

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Faculty of Science
B.Sc (Data Science) II-Year, CBCS–IV Semester Regular Examinations –June, 2023
PAPER: Machine Learning

Time: 3 Hours   Max Marks: 80

Section-A

I. Answer any *eight* of the following questions   (8x4=32 Marks)
1. Separation of training and testing Data.
2. Applications of Machine Learning.
3. Feature Vectors.
4. Importance of Good Features.
5. Write about Bio inspired learning.
6. Write about Feature Normalization.
7. Short notes on Statistical Estimation.
8. Write about Parity function example in relation to deeper networks.
9. Short notes on Neural Network.
10. What is a Minimum Spanning Tree?
11. What is Unsupervised Learning?
12. What are Association Rules?

Section-B

II. Answer the following questions   (4x12=48 Marks)
13. (a) Illustrate K means clustering algorithm.

(OR)

(b) i. Write about Under fitting and Over fitting
ii. Explain about Parameters and Hyper parameters in a decision tree.

14. (a) What is a Support Vector Machine? Discuss in detail.

(OR)

(b) What is Perceptron? Discuss about the Perceptron algorithm.

15. (a) Discuss in detail about Back – propagation algorithm.

(OR)

(b) Discuss in detail about Naïve Bayes Models.

16. (a) Define clustering. Explain different types of clustering.

(OR)

(b) Explain the Apriori Algorithm.

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