

**Faculty of Science**  
**B. Sc (Data Science) II-Year, CBCS –IV Semester**  
**Regular Examinations June/July 2022**  
**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 Modelling.  
(OR)  
(b) Explain Back-Propagation Algorithm.
- 16.(a) Explain Agglomerative Algorithm.  
(OR)  
(b) Explain Apriori Algorithm.

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