

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2019**  
**I Year I Semester**  
**Introduction to Machine Learning**

**Time : 3 Hours**

**Max.marks :75**

**Section A** ( $10 \times 2 = 20$ ) Marks

Answer any **TEN** questions

1. Define : Machine Learning
2. List out the Applications of Machine Learning.
3. Differentiate between Bias and Variance.
4. List out the various Parametric Methods.
5. What is MultiDimensional Scaling?
6. Define Isomap.
7. What is Smoothing Model?
8. Define Pruning.
9. What do you mean by Competitive Learning
10. List out the various Learning Boolean functions.
11. What is Dimensionality Reduction?
12. Define : Hierarchical Clustering

**Section B** ( $5 \times 5 = 25$ ) Marks

Answer any **FIVE** questions

13. What do you mean by Supervised Learning? Explain.
14. Explain about Tuning Model complexity.
15. Explain the Maximization algorithm with example.
16. What is Decision Tree? Explain with its various types.
17. Explain about Backpropagation Algorithm.
18. Explain : a) The Perceptron b) Radial Basis function.
19. What is NonParametric Density Estimation? Explain.

**Section C** ( $3 \times 10 = 30$ ) Marks

Answer any **THREE** questions

20. Explain about Bayesian Decision Theory with examples.
21. Give an explanation for Multivariate Methods.
22. What is Clusters? Explain with all its features.
23. Explain: a) Linear discrimination b) Generalizing the Linear Model.
24. Explain about Kernel Machines.

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