

Code: 17CSCS1T4

I M.Tech-I Semester-Regular Examinations-February 2018**MACHINE LEARNING
(COMPUTER SCIENCE & ENGINEERING)**

Duration: 3 hours

Max Marks: 60

Answer the following questions.

1. a) What is Machine learning? Explain any four applications where machine learning can be used. 9 M
- b) What are Dimensions of a Supervised Machine Learning Algorithm. 6 M
- (OR)
2. a) Explain Vapnik-Chervonenkis (VC) Dimension. 8 M
- b) Discuss about Probably Approximately Correct (PAC) Learning. 7 M
- (OR)
3. a) Explain Bayesian belief network and conditional independence with example. 8 M
- b) Explain the concept of Parameter estimation. 7 M
- (OR)
4. a) What is Dimensionality Reduction? What are the two methods for reducing dimensionality? 7 M
- b) Discuss subset selection and Factor Analysis method. 8 M

5. a) What is clustering? Explain the concept of Expectation Maximization. 7 M

b) Narrate the purpose of supervised learning after clustering. Enumerate various ways that can be used for choosing number of clusters. 8 M

(OR)

6. a) Explain about univariate Trees and regression trees. 8 M

b) Discuss is the need of tree pruning and the different ways to prune a tree. 7 M

7. a) Differentiate the Two-class & Multi-class Discrimination. 5 M

b) What are the Paradigms for Parallel Processing? Explain in brief. 10 M

(OR)

8. a) Explain different training procedures of neural networks. 9 M

b) Define Learning Time. What are Time delay neural networks? 6 M