

B.E. Computer Science & Engineering (Model Curriculum) Semester-VI  
**TEE2033CS - Machine Learning**

P. Pages : 2

Time : Three Hours



**GUG/W/24/13825**

Max. Marks : 80

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- Notes :
1. All questions are compulsory.
  2. All questions carry equal marks.
  3. Due credit will be given to neatness and adequate dimensions.
  4. Assume suitable data wherever necessary.

1. a) Write short note on: 8
- i) Cross Validation
  - ii) Hypothesis space
- b) What are the applications of Supervised machine learning in modern business? 8

**OR**

2. a) Describe various applications of Machine Learning. 8
- b) Explain different types of machine learning. 8
3. a) Write note on: 8
- i) Linear SVM
  - ii) Non-Linear SVM
- b) Explain Decision tree classification Algorithm. 8

**OR**

4. a) Describe basic components of Perceptron's. 8
- b) Explain KNN Algorithm with suitable example. 8
5. a) Explain any two Regularization technique in detail. 8
- b) What do you mean by overfitting and Underfitting? How it can affect model Generalization. 8

**OR**

6. a) What are different Kernel Functions? 8
- b) Explain support vector machine in detail. 8

7. a) Describe Agglomerative Hierarchical Clustering Algorithm with suitable example. 8
- b) Differentiate between K-means clustering with Hierarchical clustering. 8

**OR**

8. a) Describe the measures between two clusters. 8
- b) Explain Density based method. 8
9. a) What is Dimensionality reduction? Explain any one technique with example. 8
- b) Explain PCA and its process with their applications. 8

**OR**

10. a) Differentiate between feature selection and feature extraction? 8
- b) Explain Unsupervised Feature selection technique. 8

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