OR

3. What is the purpose of a kernel function in classification? What are the popular kernel functions?

UNIT-II

4. Compare Normal equations method with Gradient Descent algorithm for linear regression.

OR

5. Give Regularization term and loss function for Ridge Regression

UNIT-III

6. Broadly categorize the clustering algorithms. Specify the popular algorithms for each category.

OR

7. Differentiate between feature selection and Dimensionality reduction. Write the methods for each of them

UNIT-IV

8. Does boosting method gives better performance? Draw a diagram for boosting process

OR

9. Should feature scaling be performed before training the model? Write python function for Miin-max scaling.

UNIT-V

10. What applications are suited for semi-supervise learning?

OR

11. What are the approaches for scalable machine learning? Name a few scalable machine learning frameworks.

[Dec-23]

GITAM (Deemed to be University)

[19ECS741]

M.Tech Degree Examination

CSE, CFIS & DS

I Semester

MACHINE LEARNING

(Effective from the admitted batch 2022–23)

Time: 3 Hours **Max.Marks: 60**

Instructions: All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

SECTION-A

1. **Answer all the questions:** **10×2=20M**

a) What are the commonly used convergence criteria in gradient descent algorithm?
b) How do you deal with overfitting problem?
c) Which distance measure is suitable in k-means clustering algorithm?
d) What are the different approaches of ensembling ?
e) What is active learning?
f) Differentiate between Bagging and Boosting.
g) Differentiate between online and off-line learning.
h) Compare regression and classification.
i) What is the necessity of feature scaling?
j) What are the different classification algorithms?

SECTION-B

Answer the following: **5x8=40M**

UNIT-I

2. What are the different distance measures? Write its suitability to different applications .