

Total No. of Questions : 8]

SEAT No. :

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[6263]-82

B.E. (Computer Engineering)

MACHINE LEARNING

(2019 Pattern) (Semester - VII) (410242)

Time : 2½ Hours]

[Max. Marks : 70

Instructions to the candidates :

- 1) Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
- 2) Figures to the right side indicate full marks.
- 3) Draw neat diagram wherever necessary.
- 4) Assume suitable data, if necessary.

Q1) a) Define different regression models [6]

b) What are different techniques to reduce under fitting? [6]

c) With following data of shows company expenditure. [6]

x(month)	1	2	3	4	5
y(expenditure)	12	19	29	37	45

using regression model predict expenditure of 6th month.

OR

Q2) a) What is R² measure of evaluation? [6]

b) What do you mean by least square method? Explain least square method in the context of linear regression. [6]

c) Write a short note on stochastic gradient descent algorithms. [6]

Q3) a) Why ensemble learning is used for ML? [5]

b) What are advantages and disadvantages of K-NN? [6]

c) What are different distance metrics used in k-NN? [6]

OR

P.T.O.

Q4) a) What is multiclass classification? Explain the variants of multiclass classification. [5]

b) Explain kernel methods which are suitable for SVM. [6]

c) What are different techniques used for outlier handling? [6]

Q5) a) Why K-medoid is used? Explain k-medoid algorithm. [5]

b) Why density based clustering is used? Explain any one. [6]

c) What is outlier analysis? [6]

OR

Q6) a) What is isolation factor model? [5]

b) Explain k means algorithm. [6]

c) Explain Hierarchical clustering with example [6]

Q7) a) What is Multilayer perceptron? Describe with diagram. [6]

b) What are different activation function used in NN? [6]

c) Explain Convolution Neural Network. (CNN) with suitable example. [6]

OR

Q8) a) Explain building blocks of RBF networks. [6]

b) What is Personalized recommendation? What is content based recommendation? [6]

c) Explain Recurrent Neural Networks with an example. [6]
