Total No. of Questions : 8]

SEAT No. : [ ]

PB-2244

[Total No. of Pages : 2

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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 6^{th} 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 qradient 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 is 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 as example. **[6]**

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