Printed Pages: 01   **Sub Code: MTCS031**

Paper Id: **210201**   **Roll No.** ☐☐☐☐☐☐☐☐☐☐☐

M. TECH.
(SEM-II) THEORY EXAMINATION 2018-19
MACHINE LEARNING

Time: 3 Hours   *Total Marks: 70*

Note: Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1.   Attempt *all* questions in brief.   **2 x 7 = 14**

    a.   Define Machine Learning?
    b.   Explain regression model.
    c.   What is ANN?
    d.   Explain Well defined learning problems.
    e.   Define Decision tree.
    f.   ExplainBayes classifier.
    g.   Explain Q Learning.

SECTION B

2.   Attempt any *three* of the following: **7 x 3 = 21**
    a.   Explain the role of genetic algorithm in knowledge based technique.
    b.   Differentiate between Genetic algorithm & traditional algorithm with suitable example.
    c.   Explain various ANN architecture in detail.
    d.   Describe any algorithm to implement simulated annealing.
    e.   Explain DBSCAN with its role in forming clusters.

SECTION C

3.   Attempt any *one* part of the following: **7 x 1 = 7**
    (a)   Explain back propagation algorithm with suitable example.
    (b)   Explain learning with any two learning techniques with its expression for weight-updating.

4.   Attempt any *one* part of the following: **7 x 1 = 7**
    (a)   Write Short Note on followings (i) Sampling Theory (ii) Bayes Theorem
    (b)   Explain any comparing learning technique with suitable example.

5.   Attempt any *one* part of the following: **7 x 1 = 7**
    (a)   Explain the followings (i) Generalization (ii) Multilayer Network
    (b)

6.   Attempt any *one* part of the following: **7 x 1 = 7**
    (a)   Define the process of designing a learning system. Explainvarious issues in Machine learning
    (b)   Explain Candidate elimination algorithm in detail.

7.   Attempt any *one* part of the following: **7 x 1 = 7**
    (a)
    (b)