Reg. No. :

Question Paper Code: 52132

M.E. DEGREE EXAMINATION, DECEMBER 2015

First Semester

Computer Science and Engineering

15PCS102 - MACHINE LEARNING TECHNIQUES

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 3 = 15 Marks)

1. What is supervised learning? Give an example.

2. Differentiate univariate linear regression and multivariate linear regression.

3. Define silhouettes. What is its purpose?

4. What is association rule mining? Give an example.

5. List out the applications in robotics control.

PART - B (5 x 14 = 70 Marks)

6. (a) Write short notes on various components of learning.   (14)

Or

(b) Discuss about bias and variance learning curves.   (14)

7. (a) Explain in detail about Support Vector Machines algorithm.   (14)

Or

(b) Describe briefly about the multilayer neural network model with suitable algorithm and example. (14)

8. (a) Briefly discusses about ensemble learning and meta learning. (14)

Or

(b) Describe in detail about the nearest neighbor model with suitable algorithm and example. (14)

9. (a) Explain briefly about learning ordered rule list and unordered rule list. (14)

Or

(b) Write short notes on descriptive rule learning. (14)

10. (a) Discuss about passive reinforcement learning. (14)

Or

(b) Explain neatly about any two applications in the game playing with algorithms. (14)

PART - C (1 x 15 = 15 Marks)

11. (a) Write and explain the steps in K-Means clustering algorithm. Compare it with a hierarchical clustering algorithm with examples. (15)

Or

(b) Compare and contrast the algorithms and advantages of various tree based graphical models. (15)

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