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**E Reg. No. :**

**Question Paper Code: 51P32**

M.E. DEGREE EXAMINATION, NOV 2017

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 20 = 100 Marks)

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| --- | --- | --- | --- | --- |
| 1. | (a) | With examples, explain the influences of some disciplines on machine learning. | CO1- U | (20) |
|  |  | Or |  |  |
|  | (b) | Explain detail about theory of generalization.  | CO1- U | (20) |
|  |  |  |  |  |
| 2. | (a) | Explain Support Vector Classification in details. | CO2- U | (20) |
|  |  | Or |  |  |
|  | (b) | Illustrate the gradient search to maximize likelihood in a neural net.  | CO2- U | (20) |
|  |  |  |  |  |
| 3. | (a) | Explain the distance weighted nearest neighbor algorithm.  | CO3- U | (20) |
|  |  | Or |  |  |
|  | (b) | Explain K-means clustering in machine learning. | CO3- U | (20) |
|  |  |  |  |  |
| 4. | (a) | Discuss the issues in decision tree learning.  | CO4- U | (20) |
|  |  | Or |  |  |
|  | (b) | Explain detail about kernel regression. | CO4- U | (20) |
|  |  |  |  |  |
| 5. | (a) | Illustrate genetic algorithms and evolutionary programming. | CO5- Ana | (20) |
|  |  | Or |  |  |
|  | (b) | Identify what are the machine learning applications in robotics. | CO5- Ana | (20) |
|  |  |  |  |  |