GIET MAIN CAMPUS AUTONOMOUS,
GUNUPUR - 765022

Registration No: | | | | | | | | | | | **M.TECH**

Total Number of Pages : 1

M.TECH 1ST SEMESTER REGULAR EXAMINATIONS, DECEMBER 2018

MACHINE LEARNING

Branch: CS, Subject Code:MCSPE1031

(Regulations 2018)

Time: 3 Hours **Max Marks : 70** **Question Code:RD18002063**

PART-A (10 X 2=20 Marks)

1. Answer the following questions.
   a. How is KNN different from k-means clustering?
   b. Define precision and recall.
   c. What is the trade-off between bias and variance?
   d. What is algorithm independent machine learning?
   e. What is the difference between artificial learning and machine learning?
   f. What are the three stages to build the hypotheses in machine learning?
   g. Distinguish between heuristic for rule learning and heuristics for decision trees?
   h. Explain the two components of Bayesian logic program?
   i. Explain what is PAC Learning?
   j. Define the term Support Vector Machine?

PART-B (5 X 10=50 Marks)

Answer any five questions from the following.

2. (a) What are the objectives of machine learning? [5]
   (b) Give a brief account on Measuring classifier performance. [5]

3. (a) Explain multi-layer perceptron model with a neat diagram. [5]
   (b) Describe the working behaviour of support vector machine with diagrams. [5]

4. (a) Explain the Canonical cases for conditional independence. [5]
   (b) Explain the various techniques for optimization of Support Vector Machine(SVM). [5]

5. (a) Explain back-propagation neural network algorithm. [5]
   (b) Compare hard computing and soft computing. [5]

6. (a) Compare and Contrast between K-Means and Kernel k-Means. [5]
   (b) Distinguish between PCA and Kernel PCA. [5]

7. (a) Explain Binary Classification Problem. [5]
   (b) What are the the advantages and disadvantages of Baye's estimator. [5]

8. Write Short notes on
   (a) Unsupervised learning. [5]
   (b) Dimensionality Reduction. [5]

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