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### APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY SECOND SEMESTER MCA (LATERAL ENTRY) DEGREE EXAMINATION, MAY 2017

Name:

### Course Code: RLMCA208 Course Name: INTRODUCTION TO MACHINE LEARNING

Max. Marks: 60

# PART A

# Answer all questions. Each question carries 3 marks.

- 1. How uniform distribution differs from normal distribution?
- 2. What are the strengths and weaknesses of K-NN Algorithm?
- 3. What do you meant by a decision tree?
- 4. What is correlation?
- 5. Explain about perceptron.
- 6. What is deeplearning? How it differs from lazy learning.
- 7. What is a Support Vector?
- 8. How Boosting process improves model performance?

# PART B

### Answer all questions. Each question carries 6 marks.

9. How do machines learn? Explain the steps in detail with the help of relevant diagram.

### Or

- 10. Describe the different measurements of central tendency & measures of spreadwith relevant examples?
- 11. Explain K-NN Algorithm with an example. Mention its Strengths & Weaknesses.

### Or

- 12. With an example Explain Naive Bayes classification algorithm.
- 13. What do you meant by decision trees? Explain about the divide and conquer for the construction of decision trees with an example.

# Or

14. Explain about Simple Linear Regression & Multiple linear regression. How it differs?

Duration: 3 Hours

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#### L2D002

15. With the help of a neat diagram Explain about neural network models.

#### Or

- 16. What are activations function? Discuss various types of activation functions.
- 17. How Classification using hyper planes is possible? What is Maximum Margin Hyperplane?

#### Or

- 18. SVMs with nonlinear kernels are extremely powerful classifiers. Discuss the strengths and weaknesses of classification using kernel. What do you meant by a kernel function? List out and define any two commonly used kernel functions.
- 19. How ensembles learning improves model performance? Explain anyone ensemble based method.

#### Or

20. How will you evaluate the performance of a model using confusion matrices?

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