

**M. Tech.-I (Information Technology) (CBCS – 2015 Course) :  
SUMMER - 2019**

**SUBJECT: MACHINE LEARNING**

Day: Saturday  
Date: 18/05/2019

Time: 11.00 AM TO 02.00 PM  
Max. Marks: 60

**S-2019-3382**

**N.B:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat labeled diagram **WHEREVER** necessary.
- 4) Assume suitable data if necessary.

**SECTION-I**

**Q.1** What types of problem Machine Learning can't solve. Explain your views about the same. **(10)**

**OR**

**Q.1** What is the relation of Statistics with Machine Learning? Explain with the help of an example. **(10)**

**Q.2** Explain the concept of Rule Based Machine Learning. **(10)**

**OR**

**Q.2** What is Artificial Neural Network? How it works? Explain it in detail. **(10)**

**Q.3** What is estimation? Explain binomial distribution. **(10)**

**OR**

**Q.3** Explain in short the role of Machine Learning in Driverless Cars and Smart Phones **(10)**

**SECTION-II**

**Q.4** Explain Viterbi Algorithm in detail. Write the pseudo code of Viterbi Algorithm **(10)**

**OR**

**Q.4** What is Cross validation? Why it is required? **(10)**

**Q.5** What are practical applications of Machine Learning? Explain how machine learning helps Internet Search Engines to optimize and display correct search results **(10)**

**OR**

**Q.5** Explain how Reinforcement Learning Works? **(10)**

**Q.6** What is the role of Clustering? How number of clusters are decided? **(10)**

**OR**

**Q.6** Explain the concept of Deep Learning. **(10)**

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