## BE/INSEM/APR - 586
## B.E. (Computer Engineering)
## 410259: MACHINE LEARNING
## (2015 Pattern) (Semester - II)

*Time : 1 Hour]*                                                    *[Max. Marks : 30*

*Instructions to the candidates :*

1) *Answer Q1 or Q2, Q3 or Q4 and Q5 or Q6.*
2) *Neat diagrams must be drawn wherever necessary.*
3) *Assume suitable data, if necessary.*

*Q1)* a) Explain supervised learning with example.                                **[5]**

b) Discuss the reinforcement learning and write in brief the applications.**[5]**

OR

*Q2)* Describe the role of machine learning in the following applications :      **[10]**

   a) Google home or Alexa

   b) Unmanned Vehicles

*Q3)* Explain in brief the feature selection and discuss in details any suitable feature selection method.                                                        **[10]**

OR

*Q4)* a) Write a short note on Kernel PCA?                                        **[5]**

b) Discuss in brief the dictionary learning.                                     **[5]**

*Q5)* a) Explain isotonic regression and write the applications in brief.         **[5]**

b) What do you mean by linearly separable data and non-linearly separable data?                                                                        **[5]**

OR

*Q6)* Explain in detail the Ridge regression and the Lasso regression.           **[10]**

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