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SEAT No. :

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**BE/INSEM/APR - 586**

**B.E. (Computer Engineering)**

**410250: 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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