

Time: 3 Hours

Max. Marks: 80

N.B.: (1) Q. 1 is compulsory.

80 Marks

(2) Attempt any three out of the remaining five.

(3) Figures to the right indicate full marks.

- Q.1** A Bias/Variance tradeoff 5  
B Intelligent Agent 5  
C Principal Component Analysis 5  
D Activation Function 5
- Q.2** A Explain Expectation-Maximization algorithm with an example. 10  
B Discuss Dimensionality Reduction in detail. 10
- Q.3** A Explain K-nearest neighbor algorithm with example. 10  
B Explain Support Vector Machine in detail. 10
- Q.4** A Discuss Perceptron algorithm with a neat flowchart. 10  
B Explain First order logic with example. 10
- Q.5** A Explain A\* Algorithm with a suitable example. 10  
B Explain Adaline neural network with an example. 10
- Q.6** A Discuss Alpha Beta search algorithm with a suitable example. 10  
B Explain Random forest algorithm in detail. 10

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