



Sanjay Ghodawat University, Kolhapur

2018-19

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

EXM/P/09/01

**Year and Program: 2018-19**

**School of Commerce &  
Management**

**Department of M.B.A**

**Course Code: MMC BA 613**

**Course Title: Essentials of  
Machine Learning**

**Semester – III**

**Day and Date**

**End Semester Examination  
(ESE)**

**Time:**

**Max Marks: 100**

**Instructions:**

- 1) All questions are compulsory.
- 2) Assume suitable data wherever necessary.
- 3) Figures to the right indicate full marks.

Q.1	Attempt the following	Marks	Bloom's Level	CO
Q.1	a) Describe How Machine Learning implemented in different types applications?	07	L <sub>5</sub>	CO1
	OR			
	a) Compare Bayesian models with Bayesian classifier	07	L <sub>4</sub>	CO1
	b) Write Regression & linear model regression with example in detail?	08	L <sub>6</sub>	CO2
	OR			
	b) Write a note on Machine Learning applications	08	L <sub>6</sub>	CO2
Q.2	Attempt the following			
	a) Discuss Decision making in Business intelligence System with supervised Learning model	07	L <sub>2</sub>	CO3
	OR			
	a) Explain single linear regression & multiple linear regression model with equation?	07	L <sub>3</sub>	CO3
	b) Describe supervised regression model with regression & classification model	08	L <sub>5</sub>	CO4
	OR			
Q.3	b) Write a note on discriminant functions in supervised Learning?	08	L <sub>6</sub>	CO4
	Solve any Two			
	a) Describe basics of Machine Learning in business Intelligence system?	08	L <sub>5</sub>	CO1
	b) Write a note on mining technique in machine learning?	08	L <sub>6</sub>	CO2
	c) Discuss Measuring the performance of predictive models in machine learning?	08	L <sub>3</sub>	CO3

Q.4	d) Explain Bayesian logistic regression model with examples?	08	L <sub>3</sub>	CO4
	<b>Solve any Two</b>			
	a) Explain classification in supervised learning with examples?	09	L <sub>3</sub>	CO5
	b) Discuss Neural network with feed forward network function	09	L <sub>2</sub>	CO5
	c) Write a note on Radial basis function network?	09	L <sub>6</sub>	CO5
Q.5	<b>Solve any Two</b>			
	a) Describe clustering in unsupervised learning mechanism?	09	L <sub>5</sub>	CO6
	b) Write an EM algorithm for model selection?	09	L <sub>6</sub>	CO6
	c) Express Probabilistic PCA & Probabilistic graphical models	09	L <sub>4</sub>	CO6
Q.6	<b>Solve any Three</b>			
	a) Write a note on error back propagation in Neural networks	06	L <sub>6</sub>	CO5
	b) Explain Bayesian neural networks with kernel methods	06	L <sub>3</sub>	CO5
	c) Write a K-mean clustering algorithm with example	06	L <sub>6</sub>	CO6
	d) Describe factor analysis & principal component analysis	06	L <sub>5</sub>	CO6

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