

FACULTY OF INFORMATICS
MCA 2 Year Course - II Semester (Supply) Examination, April 2022
Subject: Machine Learning

Time: 3 Hours

Max. Marks: 70

(Missing data, if any, may be suitably assumed)
Note: Answer any five questions from the following.
All questions carry equal marks.

1. (a) Describe statistical decision theory.
(b) Illustrate joint probability with an example.
2. (a) Explain Bayes estimates.
(b) Elaborate dot product of two matrices with an example.
3. (a) Discuss linear regression method.
(b) Write about partial least squares.
4. (a) Describe the technique of ridge regression.
(b) Explain the steps of PCA.
5. (a) Give an overview of the working of LDA.
(b) Describe artificial neural networks.
6. (a) Discuss the functionality of SVM.
(b) Analyze bayes optimal classifier.
7. (a) How to perform hypothesis testing? Discuss.
(b) Describe Adaboost method.
8. (a) Tell about K-medoids in detail.
(b) Why machine learning in spectral domain? Explain.
9. (a) State the expectation maximization technique.
(b) Write notes on reinforcement learning.
10. (a) List the applications of GMMs and brief each one.
(b) Describe the graphical models for machine learning.
