Code No.: CS8111PE

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CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS
I–M.TECH–I–Semester End Examinations (Regular) – April - 2022
MACHINE LEARNING (PE - I)
(CSE)

[Time: 3 Hours]   [Max. Marks: 70]

Note: This question paper contains two parts A and B.
   Part A is compulsory which carries 20 marks. Answer all questions in Part A.
   Part B consists of 5 Units. Answer any one full question from each unit. Each question
   carries 10 marks and may have a, b, c as sub questions.

PART-A   (20 Marks)

1. a) Define Machine Learning. Why is it needed?   [2M]
   b) List the problems faced in Decision Tree Learning.   [2M]
   c) Why Unsupervised Learning is used?   [2M]
   d) Why can kernel PCA perform better than standard PCA?   [2M]
   e) How does Random Forest model work?   [2M]
   f) What is model selection in Machine Learning?   [2M]
   g) How representation learning is relate to Machine Learning and Deep Learning? [2M]
   h) What is feature representation?   [2M]
   i) How do you make a scalable Machine Learning model?   [2M]
   j) List the various learning techniques of Machine Learning?   [2M]

PART-B   (50 Marks)

2. List and Explain the various types of the Support Vector Machines.   [10M]
                              OR
3. Describe the Hypothesis Space Search in Decision Tree Learning   [10M]

4. Explain the Unsupervised Learning in Machine Learning with example.   [10M]
                              OR
5. Discuss the Matrix Factorization and Matrix Completion.   [10M]

6. Difference between bootstrapping and bagging.   [10M]
                              OR
7. Compare and contrast the Gradient boosting and Random Forest.   [10M]

8. Discuss the time series Modeling in Machine Learning.   [10M]
                              OR
9. Illustrate the feature representation in Deep Learning.   [10M]

10. Explain the following: [10M]
       i) Semi supervised learning
       ii) Distributed learning
                              OR
11. List and explain the classifications methods for IOT.   [10M]

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