

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2022
(Third Semester)

Branch – COMPUTER SCIENCE

MACHINE LEARNING

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

1. Different learning methods does not include?
 - a. Memorization
 - b. Analogy
 - c. Deduction
 - d. Introduction
2. What is Machine learning?
 - a. The autonomous acquisition of knowledge through the use of computer programs
 - b. The autonomous acquisition of knowledge through the use of manual programs
 - c. The selective acquisition of knowledge through the use of computer programs
 - d. The selective acquisition of knowledge through the use of manual programs
3. _____ is a widely used and effective machine learning algorithm based on the idea of bagging.
 - a. Regression
 - b. Classification
 - c. Decision Tree
 - d. Random Forest
4. Machine Learning algorithm build a model based on sample data known as
 - a. Training Data
 - b. Transfer Data
 - c. Data Training
 - d. None
5. Which of the following is required by K-Means Clustering?
 - a. Defined Distance Metric
 - b. Number of Clusters
 - c. Initial Guess as to Cluster Centroids
 - d. All the Above
6. Which of the following is not function of symbolic in the various function on representation of Machine Learning?
 - a. Rules in proportional logic
 - b. Hidden-Markov Models
 - c. Rules in First order predicate logic
 - d. Decision Trees
7. Real-Time decisions, Game AI, Learning Tasks, Skill Acquisition and Robot navigation are application of _____.
 - a. Reinforcement Learning
 - b. Supervised Learning
 - c. Unsupervised Learning
 - d. None
8. What is the way to ensemble multiple classifications or regression?
 - a. Bagging
 - b. Blending
 - c. Boosting
 - d. Stacking
9. Machine learning is a subset of which of the following.
 - a. Artificial intelligence
 - b. Deep learning
 - c. Data learning
 - d. None of the above
10. Analysis of ML algorithm needs
 - a. Statistical learning theory
 - b. Computational learning theory
 - c. Both A and B
 - d. None of the above

Cont...

SECTION - B (25 Marks)

Answer ALL questions
 ALL questions carry EQUAL Marks (5 x 5 = 25)

- 11 a Discuss Machine Learning.
 b Explain Regression. OR
- 12 a Illustrate Association rules.
 b Justify Pruning. OR
- 13 a Classify K-Means Clustering.
 b Discuss Hidden Markov Models. OR
- 14 a Sketch Single State Case.
 b Explain Bagging. OR
- 15 a Describe Replication.
 b Note Bootstrapping. OR

SECTION -C (40 Marks)

Answer ALL questions
 ALL questions carry EQUAL Marks (5 x 8 = 40)

- 16 a Elucidate Supervised Learning.
 b Determine Model Selection and Generalization. OR
- 17 a Discuss Classification Trees.
 b Enumerate the Multivariate Trees. OR
- 18 a Determine Hierarchical Clustering.
 b Assess Discrete Markov Processes. OR
- 19 a Justify Elements of Reinforcement learning.
 b Explain Combining Multiple Learners. OR
- 20 a Illustrate Randomization.
 b Out Sketch Guidelines for Machine Learning Experiments. OR

Z-Z-Z

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