

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – COMPUTER SCIENCE

MACHINE LEARNING

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Identify the type of learning in which labeled training data is used
(i) Semi unsupervised learning (ii) Supervised learning
(iii) Reinforcement learning (iv) Unsupervised learning
- 2 Which type of analysis involves three or more variables?
(i) uni variate statistical analysis (ii) bi variate statistical analysis
(iii) multivariate statistical analysis (iv) all the above
- 3 Which of the following is non parametric algorithm?
(i) K nearest neighbour (ii) Naive Bayes
(iii) Neural Networks (iv) Regression
- 4 Which of the following is not function of symbolic?
(i) Decision Tree (ii) Rule in propositional logic
(iii) Hidden markov models (iv) Rules in first order predicate logic
- 5 Alternative hypothesis is also called
(i) Composite hypothesis (ii) Research hypothesis
(iii) Simple hypothesis (iv) Null hypothesis

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Describe Bayes estimator in detail.
OR
b Explain about unsupervised learning.
- 7 a Discuss about multivariate classification.
OR
b Explain multivariate regression.
- 8 a Describe the condensed nearest neighbour in detail.
OR
b Summarise Discrimination by regression.
- 9 a Describe the Gaussian processes in detail.
OR
b Explain the Discrete Markov processes.
- 10 a Explain about Replication and Blocking.
OR
b Discuss about hypothesis testing.

Cont...

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Examine the types machine learning in detail.
OR
b Discuss about Parametric classification.
- 12 a Discuss the Multivariate normal distribution.
OR
b Enumerate the Linear discriminant analysis.
- 13 a Discuss about Non parametric Regression.
OR
b Enumerate Gradient Descent.
- 14 a Discuss Bayesian Estimation the parameter of a function.
OR
b Examine about the Hidden Markov Model.
- 15 a Discuss the Guidelines for machine learning experimentation.
OR
b State the Classification Algorithms Performance.

Z-Z-Z

END