

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MCA DEGREE EXAMINATION DECEMBER 2022  
(Third Semester)

Branch – COMPUTER APPLICATIONS

PYTHON FOR 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 Data Analytics uses \_\_\_\_\_ to get insights from data.  
(i) Statistical figures (ii) Numerical aspects  
(iii) Statistical methods (iv) None of the mentioned above
- 2 How is a code block indicated in Python?  
(i) Brackets (ii) Indentation  
(iii) Key (iv) Variables
- 3 Identify the kind of learning algorithm for “facial identities for facial expressions”.  
(i) Prediction (ii) Recognition patterns  
(iii) Recognizing anomalies (iv) Generating patterns
- 4 Linear-regression models are relatively simple and provide an easy-to-interpret mathematical formula that can generate \_\_\_\_\_.  
(i) Predictions (ii) Conclusion  
(iii) Interpretation (iv) None of the mentioned above
- 5 Decision tree is a \_\_\_\_\_ algorithm.  
(i) Supervised learning (ii) Unsupervised learning  
(iii) Both (iv) None of these

**SECTION - B (15 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

6. a What is an Open Source tools? Explain.  
(OR)  
b What do you mean by Data Science? Discuss the applications.
7. a What are all the Control flow in PYTHON? Explain.  
(OR)  
b Explain the Pandas to the rescue principles.
8. a What do you mean by Recognizing Patterns? Explain.  
(OR)  
b Explain the Training and Testing in detail.
9. a What are the various Cluster Validation?  
(OR)  
b Define the Naïve Bayes classifier with example.

Cont....

10. a What is mean by Hierarchical Clustering? Explain.  
(OR)  
b Explain the Support Vector Machines model.

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 6 = 30)

11. a What are the characteristics of Data Scientist? Explain the Data Science Team.  
(OR)  
b Detail discussion about the Iterative process of Data Science.
12. a Demonstrate the data types in PYTHON with example.  
(OR)  
b Elaborate on Indexing and Slicing in PYTHON.
13. a Explain the Feature Selection in Machine Learning in detail.  
(OR)  
b Define and elaborate K-Fold Cross validation in Machine Learning.
14. a Explain the Classification with KNN in detail.  
(OR)  
b What is a Classification? Explain the Classification with Logistic Regression in detail.
15. a How to use the Hierarchical Clustering in action? Explain.  
(OR)  
b Explain about Support Vector Machines and Kernel Methods.

Z-Z-Z

END