

19. (a) Discuss about structured arrays.

Or

- (b) Write short notes on correlation and covariant.

20. (a) Compare vector and matrix in R.

Or

- (b) Illustrate the structure of package in R.

PART C — ($3 \times 10 = 30$)

Answer any THREE questions.

21. Explain in detail about control statement with example.
22. Write in detail about dictionary and its operations.
23. How to process records in file using loop? Explain.
24. Write the procedure to read and write data in CSV using pandas.
25. Explain about the operations of data frame in detail.

S.No. 6342

P 22 CSCC 12

(For candidates admitted from 2022–2023 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Computer Science

PROBLEM SOLVING USING PYTHON AND R

Time : Three hours

Maximum : 75 marks

PART A — (20 Marks)

Answer ALL questions.

- I. (A) Multiple Choice Questions ($5 \times 1 = 5$)
1. Which one of the following is not a keyword in Python language?
- (a) pass (b) eval
- (c) assert (d) nonlocal
2. Which of the following is a Python tuple?
- (a) {} (b) {1,2,3}
- (c) [1,2,3] (d) (1,2,3)

3. Which of the following is not a built in exception in python?

- (a) Syntax Error (b) Value Error
(c) ZeroDivision Error (d) Export Error

4. What will be the minimum number of arguments require to pass in pandas series?

- (a) 2 (b) 3
(c) 4 (d) None of the above

5. How many atomic vector types does R have?

- (a) 3 (b) 4
(c) 5 (d) 6

(B) Fill in the blanks (5 × 1 = 5)

6. _____ and _____ are the two main types of functions in Python.

7. Dictionary makes use of _____

8. A _____ method is used to position the file object at a particular position in a file.

9. _____ code is used to install numpy in the windows system containing python.

10. Functionality of R is divided into a number of _____

II. Answer the following (5 × 2 = 10)

11. List the built-in functions in python.

12. Write the feature of dictionary.

13. What is data hiding?

14. Define Numpy.

15. Compare vector and array.

PART B — (5 × 5 = 25)

Answer ALL questions, Choosing either (a) or (b).

16. (a) What are the string operations available in python? Explain.

Or

(b) Write a note on Expressions.

17. (a) List and Explain string formatting functions.

Or

(b) How to traverse a list? Explain.

18. (a) Illustrate the structure of file processing.

Or

(b) Write a detailed note on multiple inheritance.