

(FOR THE CANDIDATES ADMITTED

24UAI307

DURING THE ACADEMIC YEAR 2024

ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS: NOVEMBER 2025

B.Sc. CS with AI &ML(SF)

MAXIMUM MARKS: 75

SEMESTER: III

TIME : 3 HOURS

PART - III

24UAI307 – PROGRAMMING IN PYTHON

SECTION – A

(10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS.

(K1)

1. Which of the following is the valid variable name?
a) True="hello" b) A="hello" c) For="hello" d) Else="hello"
2. What will be the output of the following Python code?

```
print("abcd"[2:])
```


a) a b) ab c) cd d) dc
3. Which of the following is a Python tuple?
a) [1, 2, 3] b) (1, 2, 3) c) {1, 2, 3} d) {}
4. The readlines() method returns _____
a) str b) a list of lines c) a list of single characters d) a list of integers
5. What method is used to display the first few rows of a Pandas DataFrame or Series?
a) tail() b) head() c) top() d) first()

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES

(K2)

6. What is the use of type() function in Python?
7. What is meant by list in python?
8. What is the use of zip() function?
9. What is regular expression in Python?
10. Write any two differences of JSON and XML in python.

SECTION – B

(5 X 5 = 25 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

(K3)

11. a) Write a short note on statements and expressions.
(OR)
b) Write the concept of Command Line Arguments.
12. a) Discuss basic string operations
(OR)
b) Write in brief about built-In functions used on Lists.

13. a) Explain (i) Creating Dictionary (ii) Accessing and Modifying key:value pairs
(OR)
b) Write the relation between Tuples and Lists.
14. a) Discuss Reading and Writing Binary Files.
(OR)
b) Write a short note about Regular Expression with glob Module.
15. a) Write Python Program to Calculate Area and Perimeter of Different Shapes Using Polymorphism.
(OR)
b) Write a short note on Functional Programming.

SECTION – C**(5 X 8 = 40 MARKS)****ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4 (Or) K5)**

16. a) Explain Control Flow Statements with example.
(OR)
b) Explain the concept of Keyword Arguments with suitable example.
17. a) Write briefly about String Methods with example program.
(OR)
b) Discuss List Operations with example.
18. a) Explain (i) Indexing and Slicing in Tuples. (ii) Built-In Functions Used on Tuples.
(OR)
b) Explain Set Methods and Frozenset.
19. a) Write a brief note on Creating and Reading Text Data in files.
(OR)
b) Explain the different methods of Regular Expressions.
20. a) Elaborate the concept of Classes with Multiple Objects
(OR)
b) Analyze the differences between a Pandas Series and a DataFrame with suitable examples.

Ethical paper