

Reg. No.

Question Paper Code

12112

02 AUG 2023

**B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023**

Second Semester

**Information Technology**

(Common to Computer Science and Engineering, Artificial Intelligence and Data Science, Computer Science and Engineering (IOT), Computer Science and Engineering (AIML), Computer Science and Engineering (Cyber Security) & M.Tech. - Computer Science and Engineering)

**20ESIT202 - PYTHON PROGRAMMING**

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

- |   | <i>Marks,<br/>K-Level, CO</i> |
|---|-------------------------------|
| 1. What is operator precedence?                                       | 2,K1,CO1                      |
| 2. List the features of Python.                                       | 2,K1,CO1                      |
| 3. Write a C program to find whether the given number is odd or even. | 2,K2,CO2                      |
| 4. Write a Python program to find whether set A is subset of set B.   | 2,K2,CO2                      |
| 5. Comment with an example on the use of local and global variable.   | 2,K2,CO3                      |
| 6. What is Aliasing? Give Example.                                    | 2,K1,CO3                      |
| 7. Define Errors and list its types.                                  | 2,K1,CO4                      |
| 8. What are classes and objects?                                      | 2,K1,CO4                      |
| 9. What do you mean by data visualization?                            | 2,K1,CO5                      |
| 10. Name some common data structure of python's Pandas library.       | 2,K1,CO5                      |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

11. a) (i) Illustrate Membership operators, Identity operators and Logical Operators. 7,K2,CO1  
(ii) Demonstrate a program to find Sum of n numbers Using for and While statement. 6,K2,CO1
- OR**
- b) Explain Conditional if, alternative if, and chained conditional statements with syntax, flowchart and example Python Programs. 13,K2,CO1
12. a) What is string manipulation? Explain different functions of string manipulations in detail. 13,K2,CO1

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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**OR**

- b) Explain Linear and binary search with an example. 13,K2,CO2
13. a) Discuss the concept of passing the array as an argument in a function with an example program. 13,K2,CO3

**OR**

- b) Explain Packages in Python with suitable example. 13,K2,CO3
14. a) Illustrate in detail how text files are Read and Write in Python with various commands. 13,K2,CO4

**OR**

- b) Write a Python program to handle exceptions like ZeroDivision Error, Name Error, Type Error, Key Error, Index Error. 13,K3,CO4
15. a) (i) Write a python program to plot a line graph. 7,K3,CO5  
(ii) Explain Array Indexing in Numpy. 6,K2,CO5

**OR**

- b) Describe various access specifiers with examples. 13,K2,CO5

**PART - C (1 × 15 = 15 Marks)**

16. a) (i) Write a Python program to copy a file line by line into a new file. 7,K3,CO6  
(ii) Write a python program to perform character, word and line count in a file. 8,K3,CO6

**OR**

- b) (i) Define recursive function. Discuss with suitable example. 7,K2,CO6  
(ii) Write a Python program to store 'n' numbers in a list and sort the list using selection sort. 8,K3,CO6