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Question Paper Code	12535
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B.E. / B.Tech. -DEGREE EXAMINATIONS, NOV / DEC 2023

Second Semester

Information Technology

(Common to Artificial Intelligence and Data Science, Computer Science and Engineering, Computer Science and Engineering (IOT) & Computer Science and Engineering (SC))

20ESIT202 - PYTHON PROGRAMMING

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|--|-------------------------------|
| 1. Differentiate local and global variable. | <i>2,K2,CO1</i> |
| 2. How to access the elements of a string in python? | <i>2,K2,CO1</i> |
| 3. What is a list? How lists differ from tuples? | <i>2,K1,CO2</i> |
| 4. How to create a dictionary in python? Illustrate the use of keys in dictionary. | <i>2,K2,CO2</i> |
| 5. List out the rules to define a function in python. | <i>2,K2,CO3</i> |
| 6. What is a module? Give example. | <i>2,K1,CO3</i> |
| 7. What is the purpose of object variables in Python? | <i>2,K1,CO4</i> |
| 8. State exception handling in python. | <i>2,K1,CO4</i> |
| 9. Write a Program in python to find the factorial of a given number. | <i>2,K2,CO6</i> |
| 10. Write a Program in python to find the sum of odd numbers. | <i>2,K2,CO6</i> |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

- | | |
|--|-----------------|
| 11. a) (i) What are the various operators in Python? Give suitable example. | <i>7,K2,CO1</i> |
| (ii) Explain break statement and continue statement in Python with an example. | <i>6,K2,CO1</i> |
| OR | |
| b) (i) Illustrate nested if and elif statements in Python with an example. | <i>7,K2,CO1</i> |
| (ii) Write a Python code to iterate through the values of n variables. | <i>6,K2,CO1</i> |
| 12. a) (i) Explain in detail about string operations in python. | <i>6,K2,CO2</i> |
| (ii) Explain various operations for dynamically manipulating in dictionaries. | <i>7,K2,CO2</i> |

OR

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

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- b) Explain the various operations that can be performed on sets. *13,K2,CO2*
13. a) (i) Write a Python function to swap the values of two variables. *6,K2,CO3*
(ii) Describe packages in Python with an example. *7,K2,CO3*
- OR**
- b) Explain why functions are needed. Outline function definition and function call with an example. *13,K2,CO3*
14. a) (i) Discuss the use of the format operator in file processing. *6,K2,CO4*
(ii) Write a Python code to count the number of words in a Python file. *7,K2,CO4*
- OR**
- b) (i) Illustrate the different modes for opening a file and explain them. *6,K2,CO4*
(ii) Discuss the use of the try block and except block in Python with syntax. *7,K2,CO4*
15. a) Write an application for banking application system using python program. *13,K3,CO5*
- OR**
- b) Write an application for bus reservation system using python program. *13,K3,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain Numpy package and NumPy Array Operations in python. *15,K3,CO5*
- OR**
- b) Explain Dataframe in Pandas with example. *15,K4,CO5*