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Question Paper Code	12691
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B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Second Semester

Information Technology

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

20ESIT202 - PYTHON PROGRAMMING

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

	<i>Marks</i>	<i>K- Level</i>	<i>CO</i>
1. List out the features of the Python programming language.	2	K1	CO1
2. What are the rules of Python Identifiers?	2	K1	CO1
3. How tuples are used as return values?	2	K1	CO2
4. Define a dictionary with an example.	2	K1	CO2
5. Differentiate local and global variables.	2	K2	CO3
6. Differentiate formal and actual arguments in python.	2	K2	CO3
7. What is the use of finally block in python?	2	K1	CO4
8. What are the modes available in file?	2	K1	CO4
9. Define a Data Frame.	2	K1	CO5
10. Define Scipy in python.	2	K1	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Outline in detail about the standard data types in Python with examples.	13	K2	CO1
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OR

b) Summarize string datatype and its operations in python.	13	K2	CO1
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12. a) Explain in detail about list operations and methods in python.	13	K2	CO2
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OR

b) Explain Conditional if, alternative if, and chained conditional statements with syntax, flowchart and example Python Program.	13	K2	CO2
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13. a) i) Explain modules in python with example. 6 K2 CO3
 ii) Explain packages in python with example. 7 K2 CO3
- OR**
- b) i) Explain the recursive function with an example. 6 K2 CO3
 ii) Explain the fruitful function with an example. 7 K2 CO3
14. a) Illustrate the exception handling methods available in python. 13 K2 CO4
- OR**
- b) Explain in detail about Classes and Objects in python. 13 K2 CO4
15. a) Summarize Matplotlib and display the different plots with examples. 13 K2 CO5
- OR**
- b) i) Explain Broadcasting in Numpy Array Operations. 7 K2 CO5
 ii) Explain Array Indexing in Numpy. 6 K2 CO5

PART - C (1 × 15 = 15 Marks)

16. a) i) Develop Python program to Circulate the values of n variables. 7 K3 CO6
 ii) Develop Python program to find the Square root using Newton's method. 8 K3 Co6
- OR**
- b) i) Develop python program for linear search. 7 K3 CO6
 ii) Develop python program for binary search. 8 K3 CO6