

CBCS SCHEME

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BPLCK105B

First Semester B.E/B.Tech. Degree Examination, Dec.2024/Jan.2025 Introduction to Python Programming

Time: 3 hrs.

Max. Marks:100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level, C: Course outcomes.

| Module – 1 | | | M | L | C |
|------------|----|--|---|----|-----|
| 1 | a. | Explain basic data types like int, float, double and string with an example. | 6 | L2 | CO1 |
| | b. | Differentiate between local scope and global scope. | 6 | L2 | CO1 |
| | c. | Develop a program to calculate factorial of a number. Program to compute binomial coefficient (Given N and R). | 8 | L3 | CO1 |
| OR | | | | | |
| 2 | a. | Define functions. Explain how to pass parameters through the function with return statement. | 6 | L2 | CO1 |
| | b. | What is exception? How exception are handled in python? Write a program to solve divide by zero exception. | 6 | L2 | CO1 |
| | c. | Develop a program to generate Fibonacci sequence of length (N). Read N from the console. | 8 | L3 | CO1 |
| Module – 2 | | | | | |
| 3 | a. | Explain Augmented short hand assignment operators with an example. | 7 | L2 | CO2 |
| | b. | Explain different type of methods like append(), Remove(), sort(), pop() in python programming list. | 7 | L2 | CO2 |
| | c. | Develop a program to find mean, variance and standard deviation. | 6 | L3 | CO3 |
| OR | | | | | |
| 4 | a. | Explain set() and setdefault() method in dictionary. | 7 | L2 | CO2 |
| | b. | Develop a python to print area of rectangle. | 6 | L3 | CO2 |
| | c. | Define pretty printing. How does pretty print work in python with an example. | 7 | L2 | CO2 |
| Module – 3 | | | | | |
| 5 | a. | Explain useful string functions like : i) Capitalize ii) Count iii) Find iv) Lower v) Upper vi) Replace with an example. | 8 | L2 | CO3 |
| | b. | Develop a python code to determine whether given string is a palindrome or not a palindrome. | 6 | L3 | CO3 |
| | c. | Explain : i) isalpha ii) isalnum iii) isspace(), | 6 | L2 | CO3 |

OR

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|---|----|---|---|----|-----|
| 6 | a. | Explain OS path module with an example. | 6 | L3 | CO2 |
| | b. | Explain the concept of file path. Also discuss absolute and relative file path. | 8 | L3 | CO3 |
| | c. | Program to print of multi clipboard with appropriate message. | 6 | L3 | CO3 |

Module – 4

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|---|----|---|---|----|-----|
| 7 | a. | Develop a program to backing up a given folder (folder in a current working directory) into a zip file by using relevant modules and suitable methods. | 6 | L3 | CO4 |
| | b. | List out the difference between shutil.copy() and shutil.copytree() method. | 6 | L1 | CO4 |
| | c. | Explain the following file operations in python with suitable example : i) Copying files and folders ii) Moving files and folders iii) Permanently deleting files and folders. | 8 | L2 | CO4 |

OR

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|---|----|--|---|----|-----|
| 8 | a. | Briefly explain assertion and raising a exception. | 8 | L2 | CO4 |
| | b. | List out the benefits of using logging module with an example. | 6 | L1 | CO4 |
| | c. | Write a function named DivExp which takes two parameters a, b and returns a value C(c= a/b). Write suitable assertion for a 70 in function DivExp and raise an exception for when b = 0. Develop a suitable program which reads two values from the console and calls a function DivExp. | 6 | L3 | CO4 |

Module – 5

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|---|----|--|---|----|-----|
| 9 | a. | Define a function which takes two objects representing complex numbers and returns a new complex number with a addition of two complex numbers. Define a suitable class 'complex' to represent the complex number. Develop a program to read N(N >= 2) complex numbers and compute the addition of 10 complex numbers. | 8 | L3 | CO5 |
| | b. | Explain the concept of inheritance with an example. | 6 | L2 | CO5 |
| | c. | Explain the _str_ and the _init_ method with an example. | 6 | L2 | CO5 |

OR

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|----|----|---|---|----|-----|
| 10 | a. | Define a class and object, construct the class called rectangle and initialize it with height = 100, width = 200, starting point as (x = 0, y = 0). Write a program to display the centre pint co-ordinates of a rectangle. | 8 | L3 | CO5 |
| | b. | Briefly explain the printing of objects with an example. | 6 | L2 | CO5 |
| | c. | Differentiate operator over loading and operator overriding in python. | 6 | L2 | CO5 |
