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**BPLCK205B**

## Second 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 |
|---|---|---|---|---|---|
| Q.1 | a. | Describe the following flow control statements in python programming: <br> (i) if <br> (ii) else <br> (iii) while | 8 | L1 | CO1 |
| | b. | Write a function to calculate factorial of a number. | 8 | L3 | CO1 |
| | c. | Define def statements with parameters. | 4 | L1 | CO1 |
| | | **OR** | | | |
| Q.2 | a. | Explain the syntax and control flow diagrams for break and continue statement. | 8 | L2 | CO1 |
| | b. | Illustrate the dissection of python program. | 8 | L2 | CO1 |
| | c. | Describe the return values and return statements. | 4 | L1 | CO1 |
| | | **Module – 2** | | | |
| Q.3 | a. | Read N numbers from the console and create a list. Develop a program to print, mean, variance and standard deviation with suitable messages. | 8 | L3 | CO2 |
| | b. | Summarize the sequence data types of python programming. | 8 | L2 | CO2 |
| | c. | Compare and contrast dictionaries Vs lists. | 4 | L2 | CO2 |
| | | **OR** | | | |
| Q.4 | a. | Develop a program to print 10 most frequently appearing words in a text file. [Hint : Use dictionary with distinct words and their frequency of occurrences. Sort the dictionary in reverse order of frequency and display dictionary slice of first 10 items]. | 8 | L3 | CO2 |
| | b. | Explain the slots of tic – tac – toe board with its corresponding keys using data structures in python programming. | 6 | L2 | CO2 |
| | c. | Paraphrase the working with lists in python programming. | 6 | L1 | CO2 |
| | | **Module – 3** | | | |
| Q.5 | a. | Describe the Python string handling methods with examples : Split ( ), endswith ( ), ljust ( ), center ( ), lstrip ( ). | 10 | L2 | CO3 |
| | b. | Summarize the process of input validation in python programming. | 10 | L2 | CO3 |

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| | | **OR** | | | |
| Q.6 | a. | Explain Python string handling methods with examples : join ( ), startswith ( ), rjust ( ), strip ( ), rstrip ( ). | 10 | L2 | CO3 |
| | b. | Demonstrate the process of copying and pasting strings with pyperclip module. | 10 | L2 | CO3 |
| | | **Module – 4** | | | |
| Q.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. | 10 | L3 | CO3 |
| | b. | Describe the file reading or writing process in python programming. | 10 | L2 | CO3 |
| | | **OR** | | | |
| Q.8 | a. | Explain the process of compressing files with the zip file module. | 10 | L2 | CO3 |
| | b. | Summarize the organization of files using shutil module. | 10 | L3 | CO3 |
| | | **Module – 5** | | | |
| Q.9 | a. | Explain about class and objects. | 10 | L2 | CO4 |
| | b. | Explain purefunction and modifier. | 10 | L2 | CO4 |
| | | **OR** | | | |
| Q.10 | a. | Illustrate operator overloading and polymorphism in python with an example. | 10 | L2 | CO4 |
| | b. | Explain _init_ and _str_ method with examples. | 10 | L2 | CO4 |

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