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RV COLLEGE OF ENGINEERING®
(An Autonomous Institution affiliated to VTU)
I Semester B. E. Examinations May-2023
Common to all programs

INTRODUCTION TO PYTHON PROGRAMMING (ELECTIVE)
Maximum Marks: 100

Time: 03 Hours

Instructions to candidates:
1. Answer all questions from Part A. Part A questions should be answered in first three pages of the answer book only.
2. Answer SIX full questions from Part B. In Part B question numbers 2 and 11 are compulsory. Answer any one full question from 3 and 4, 5 and 6, 7 and 8 & 9 and 10.

PART-A

1	1.1	What is the output of the following snippet? $Tuple=(10,20,30,40,50)$ $Tuple[3] = 50$	01
	1.2	What will be the output of this code? $a = ['APPLE','BANANA']$ for I in a: print(i.lower())	01
	1.3	What will be the output of the following code snippet? $a = 100$ $b = 200$ print (a, b) $a, b = b, a$ print (a, b)	01
	1.4	What is the output of the following code? $X = $ "555" $Y = X + str(9)$ print(Y)	01
	1.5	Consider the following sequence $List = [10, 20, 40, 50, 60]$ Add an integer 30 after the value 20.	01
	1.6	What is the output of the following statement? print("\a")	01
	1.7	Write the difference between the Conditional and Control Statements.	01
	1.8	What is the output of the following code? for i in range (1, 10, 2): print(i)	01
	1.9	In what sense pop() function is different from clear() function in list.	01
	1.10	Write the output of the following code? $Fruits = \{'grapes' : 'green', 'apple': 'red' \}$ print(Fruits.keys())	01

PART-B

2	a	Summarize the typical characteristics of the Python Language.	07

	b	Illustrate the following concepts with an example:
		  i) Getting the input from the terminal
		  ii) Type casting
		  iii) Creating the Strings
			07

| 3 | a | Write Python Program to reverse a number and also find the Sum of digits in the reversed number. Prompt the user for input. | 07 |
| | b | Discuss Identity and Membership functions in python with an example. | 07 |

OR

| 4 | a | Write a menu driven program to perform Arithmetic operations using Python. | 07 |
| | b | Discuss the usage of Bitwise Operators. | 07 |

5	a	Illustrate Tuple operations.	07
	b	Consider a list *Example* = ['A','B','C','D','E'] and perform the following operations on the given list:	
		i) sort()	
		ii) extend	
		iii) index()	
		iv) copy()	07

OR

6	a	Illustrate the concept the Dictionaries in python with an example.	07
	b	Consider a string *str* = 'RV College of Engineering' and perform the following operations on the given string:	
		i) capitalize()	
		ii) count	
		iii) endswith()	
		iv) find()	07

| 7 | a | Discuss the concept of Global variable and Arbitrary Keyword Arguments in Python. | 07 |
| | b | Illustrate Exception handling in Python with an example. | 07 |

OR

8	a	With the help of Python functions, write a Python program to print the Multiplication table. Note: Accept the input from the Terminal	07
	b	Write a program to do the following tasks:	
		i) Creating a file	
		ii) Writing into the file	
		iii) Reading from the file.	07

| 9 | a | Illustrate Default and Parameterized Constructor. | 07 |
| | b | Discuss the concept of Polymorphism with Inheritance. | 07 |

OR

| 10 | a | Illustrate the relevance of Access Modifiers in Python. | 07 |
| | b | Discuss Static and Class Methods. | 07 |

| 11 | a | Consider a sequence of numbers with some missing values. Write a python program for inserting the missing values, and remove some of the values from the sequence. Also, add a few more values to the existing sequence. | 10 |
| | b | Create an Employee 'Employee' Database using dictionaries and perform the insert, search and display operations. | 10 |