BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(END SEMESTER EXAMINATION)

CLASS: BCA   SEMESTER : III
BRANCH: BCA   SESSION : MO/2023

SUBJECT: CA309 INTRODUCTION TO PYTHON PROGRAMMING

TIME: 3 Hours   FULL MARKS: 50

INSTRUCTIONS:
1. The question paper contains 5 questions each of 10 marks and total 50 marks.
2. Attempt all questions.
3. The missing data, if any, may be assumed suitably.
4. Before attempting the question paper, be sure that you have got the correct question paper.
5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.

			CO	BL
Q.1(a)	Explain the functions of operating system and its role in program's execution.	[5]	1	1
Q.1(b)	Explain type conversion of various data in Python language with suitable examples. Also show the simultaneous and augmented assignment operator examples.	[5]	1	1
Q.2(a)	Explain the syntax of for loop with else statement using suitable example. Also write a program to find out the square root of a number using while loop.	[5]	2	2
Q.2(b)	Explain the workings of the following built-in functions with suitable examples. 1) len() 2) chr() 3) ord() 4) eval() 5) id()	[5]	2	2
Q.3(a)	Explain the use of global keyword. Write a program using user defined function to show the concept of recursion with suitable example.	[5]	3	3
Q.3(b)	How can we create a 1D list using list comprehension? Also write a program to transpose a 2D list of mxn order.	[5]	3	3
Q.4(a)	Explain the differences among the list, set and tuple. Write a program to merge two tuples to create a new bigger tuple.	[5]	4	3
Q.4(b)	Write program to create a dictionary that accepts a country name as a key and its capital city as the value. Show the use of keys(), values() and items() functions with dictionary. Display the details of dictionary sorted on capital city name in alphabetical order.	[5]	4	4
Q.5(a)	Briefly explain the features of object-oriented programming. Also write a program to implement the single level inheritance concept using suitable example.	[5]	5	4
Q.5(b)	Explain the advantages of using a disk file to store the data. Also write a program to perform the read and write operation in a disk file using proper exception handling mechanism.	[5]	5	3

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