POORNIMA UNIVERSITY, JAIPUR
END SEMESTER EXAMINATION, 2023-2024 EVEN SEMESTER

BCA (All) I () - II (Main/Back) End Semester Examination,
23BCACCA2102: Python Programming

Time: 3 Hours   **Total Marks:** 60   **Min. Passing Marks:** 21/24/27   **Question Paper ID:** 001089

Instructions: Attempt all five questions. There is an internal choice either (a or b) in Q1 to Q5. Marks of each question or its parts are indicated against each question/part. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Bloom Level(BL): 1-Remembering, 2-Understanding, 3-Applying, 4-Analysing, 5-Evaluating, 6-Creating

Use of following supporting material is permitted during examination for this subject: Nil

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			Marks	BL	CO
Q1.	**(a)**	(i) What is Python? Explain Python features in detail. (ii) Define list? Print element of list using list slicing; list= ['hi', 'python', 85, 'programming', 87, 93, 'hello', 20] 1) list[0:7:3] 2) list[-2:-6] 3)list[: 5] 4) list[-1:] 5)list [: :-1]	12	2	1

(OR)

(b) (a) Explain below data types in python with syntax and example.
   (i)   String
   (ii)   Tuple
(b) Write a python program to compute the GCD and LCM of two numbers.

			Marks	BL	CO
Q2.	**(a)**	(a) How many types of operators in python ? Explain any three types with example. (b) What is operator precedence? Write output of given code	12	2	2

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i)         x=5
           y=10
           print(5**2>25 and y<50)
ii)        print(2**(3**2))
iii)       print((2**3)**2)
iv)        print(2**3**2)
```

(OR)

(b) (i) Why we use For loop? Write a Python program to calculate the sum of all numbers from 1 to a given number.
(ii) Differentiate between pass, continue and break statement with the help of example.

			Marks	BL	CO
Q3.	**(a)**	(i) Write a Python program to count occurrence of an element in list and print the elements of given list after Remove duplicate element from list. test_list = [1, 5, 3, 6, 3, 5, 6, 1] (ii) Explain Dictionaries in Python ? Give an example.	12	3	3

(OR)

(b) (i) What is recursive function? Write a program to display the Fibonacci sequences up to nth term where n is provided by the user.
(ii) Write a python program to create a package (calculator), modules (arithmetic operation) and create sum, subtraction, multiplication and division function to module. Import these function into new python file.

			Marks	BL	CO
Q4.	**(a)**	(i) What are the benefits of inheritance? Write a program to demonstrate parameterized constructor in base class and derived class. (ii) Explain difference between method overloading and overriding with the help of suitable example.	12	4	4

(OR)

(b) (i) Create a class employee with data members: name, department and salary. Create suitable methods for reading and printing employee information.
(ii) What are the access modifiers? Explain difference between data abstraction and data hiding with the help of example.

			Marks	BL	CO
Q5.	**(a)**	(i) Explain exception handling with example using try, except, raise keywords. (ii) Write a python program to read contents of first.txt file and write same content in second.txt file.	12	5	5

(OR)

(b) (a) What are the different access modes in which you can open a file? Explain with suitable example.
(b) Discuss the following methods associated with the file object
   i) read() ii) writer() iii) readlines() iv) tell() v) seek()

End of Question Paper