Roll No												

PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OFINFORMATION SCIENCE

MAKEUP EXAMINATION – JAN 2023

Date: 23-JAN-2023

Time: 09:30 AM To 12:30 PM

Max Marks:100

Weightage:50%

Course Code: BCA1005

Course Name: Programming in Python

Program & Sem: BCA

Instructions:

(i) Read all questions carefully and answer accordingly.
(ii) Every input in the program must be taken from user.
(iii) List/Tuple/Dictionary can be read from user using eval() or loops.

Part A

Answer all the Questions. Each question carries TWO marks. (10Qx 2M=20M)

1. Identify which exception is raised when a sequence index is out of range? (C.O.No 3)[Knowledge]

2. Identify which keyword is used for function in Python language? (C.O.No 3)[Knowledge]
   a) function b) def c) fun d) define

3. Identify the function which removes an item from the list and also displays the item to be deleted? (C.O.No 2)[Knowledge]

4. Identify the function which is used to read a csv file using pandas? (C.O.No 4)[Knowledge]
   a) pandas() b)read() c) read_csv() d)read_pandas()

5. Identify truncate division operator in Python? (C.O.No 1)[Knowledge]
   a) | b) // c) / d) %

6. Identify which of the following functions is not a built-in function in python? (C.O.No 3)[Knowledge]
   a) factorial() b) print() c) seed() d) sqrt()

7. Identify the output of the following Python function? (C.O.No 2)[Knowledge]
   len(["hello",2,4,6])

   a) Error b) 6 c) 4 d) 3

8. Identify the right option to add new element to list: (C.O.No 2)[Knowledge]

   a) list1.addEnd(5) b) list1.addLast(5) c) list1.append(5) d) list1.add(5)

9. To open a file c:\scores.txt for reading, we use _____ (C.O.No 3)[Knowledge]

   a) infile = open("c:\\scores.txt", "r") b) infile = open(file = "c:\scores.txt", "r")

   c) infile = open("c:\\scores.txt", "w") d) infile = open("c:\\scores.txt", "a")

10. Identify the output of the following Python code? (C.O.No 1)[Knowledge]

```
i=1
while True:
        if i%2==0:
            break
        print(i)
        i += 2
```

a) 1 b) 1 2 c) 1 2 3 4 5 6 … d) 1 3 5 7 9 11 …

Part B

Answer all the Questions. Each question carries TEN marks. (4Qx10M=40M)

11. a) Define Operators and Expressions? List different types of operators. (4M)

b) Explain any two types of Iterative control structures(loops) in python with syntax and examples.(6M) (C.O.No 1)[Knowledge]

12. a) Explain List and its any four Methods. (4M) (C.O.No 2)[Knowledge]

b) Explain addition, deletion and updation(of elements) operations performed on dictionary with examples. (6M)

13. a) Implement a python code to read text file contents line by line.(4M) (C.O.No 3)[Application]

b) Explain any three types of function arguments in python with examples. (6M)

14. a) Describe atleast four methods of xlrd package with example:(4M) (C.O.No 4)[Knowledge]

b) Explain index operator[] and eval() function with examples:(6M)

Part C

Answer all the Questions. Each question carries TEN marks. (4Qx10M=40M)

15. You are working in ICICI bank. Your manager has asked to develop an application to calculate the loan interest based on the type of loan and loan amount **(using functions)**. Salary should be greater than 25000 otherwise invalid input. [**Note:** Loan interest amount= (Loan interest rate*Loan amount* No. of years)/100] (C.O.No 3)[Application]

Type of loan	**Loan interest rate**
1.Personal loan	10%
2.Car loan	8%
3.Home loan	6%

Sample Input and output:

Enter your loan choice: 1

Enter your loan amount: 500000

Enter your salary: 30000

Your loan interest amount for 5 years will be 250,000

16.Airtel company has wi-fi broadband plans. Details are given below in the table. Implement a python program which reads Plan Name and print plan price and Data Limit.. (C.O.No 1)[Application]

Plans Price	Plans Name	Data Limit
799	Basic	150 GB
999	Entertainment	300 GB
1499	Premium	500 GB

Sample Input and Output:

Enter your plan name: Premium
Your plan price is 1499
Your Data limit is 500 GB

17. Professor John Smith, faculty of XYZ University is the faculty advisor of 6 students. He has collected the Id numbers and marks of his students. (C.O.No 2)[Application]
    a) Help him to store the data in a suitable data structure(dictionary).
    b) He wants to find out the Ids of students having marks between 60 to 70.

Sample Input and Output:

marklist = {'01':68, '02':75, '03':80, '04':40, '05':73, '06':90}
Student Ids having marks between 60 to 70 are:
['01', '05']

18. Oh! Its time to check a company's profit over bike sales between two reputed automobile companies, Company A and Company B. Company A's manager has been asked to give presentation on the same and now , he is worried how to analyze such huge amount of data to decide and prepare his presentation that depicts his company's bike sales over company B's bike sales over past 6 months. (C.O.No 4)[Application]
    a) Initialize lists that contains company's sales details and month data for six months.
    b) Plot either side by side bar graph or stacked bar graph.

Sample output graph: