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A TIMES GROUP INITIATIVE

POSSESSION OF MOBILE IN EXAMINATION IS UFM PRACTICE

Name of Student ---------- Enrolment No. ----------
Department ----------

BENNETT UNIVERSITY, GREATER NOIDA
Supplementary Examination, January 2020

COURSE CODE: **ECSE105L** MAX. DURATION: **TWO HOUR**
COURSE NAME: **Computational Thinking Using Programming**
COURSE CREDIT: **5** MAX. MARKS: **50**

Note:

- All the questions are compulsory.
- Please write precisely and neatly. Please make clear diagram wherever required.
- No separate answer sheet will be provided

Question 1. Write short note on any three **3*2= 6 Mark**

a. Difference between set and dictionary.

b. Break and Continue

c. Mutable and Immutable data types

d. Local and Global Variables in class

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Question 2. Write a python program to print the numbers which are missing in between the range in the given list and also print those number which are outside the range. **[9 marks]**

Example: Input: Range [2:7] (Both numbers are inclusive.)

List [7,2,7,2,3,4,5,8,9]

Output1: 6 Missing from Range.

Output2: 8,9 Numbers in the list i.e. outside range.

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Question 3. Find the output of the following peace of code. If you find error in code then point out which line and give justification. **[3*2 = 6 Marks]**

A.

```
with open('abc.txt', 'w+') as fp:
    fp.write("Hello this is final exam.\n")
    fp.write("Best wishes for next semester.")
    fp.seek(0)
    print(fp.read(5))
    fp.readline()
    print(fp.read(5))
    for x in fp:
        print(x)
```

B.

```
lst1=[3,4,5,6,7]
lst2=lst1
lst3=lst1[:]
lst2[2]=20
print(lst1)
print(lst2)
print(lst3)
```

C.

```
dicti = {1: 'apple', 2: 'ball', 3: 'Hello'}
dicti[4]="1234"
print(dicti)
dicti = {1: 'apple', 2: 'ball', 3: 'ball', 3: 'abc'}
print(dicti)
```

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Question 4. Define a recursive function to calculate the Binomial coefficient C(n,k). The formula is:

$C(n, k) = C(n-1, k-1) + C(n-1, k)$

$C(n, 0) = C(n, n) = 1$

For example, if input is C(5,2), output should be 10.

10 Marks

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Question 5. Write a program to create class "Person" with name and age attributes and show method to show the details. Create three objects of this class and show their details. **10 Marks**

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Question 6. Write a program in Python to print prime numbers between 'n' and 'm' using function. Where 'n' and 'm' are given by user. **9 Marks**