

Roll No. 223112320007
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Exam Code : D-24

Subject Code—62444

B.Sc. EXAMINATION

(Main/Re-appear)

(Batch 2020 Onwards)

(Fifth Semester)

Skills Enhancement Course-I

COMPUTER APPLICATION

CCaL-505

Python Programming

Time : 3 Hours

Maximum Marks : 50

Note : Attempt *Five* questions in all, selecting *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) What happens if you put a semi-colon at the end of a python statement ?

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- 2.
- (b) Describe the behaviour of "range (s, e)" in Python.
 - (c) How can you convert a number into string ?
 - (d) What is the output of the following program ?

```
a = 10  
b = 20  
print(a or b)
```
 - (e) What is cloning of the list ?
 - (f) Write python code for str.isalpha() and str.isdigit() syntax and tabulate their results.
 - (g) How pass statement is different from a comment ?
 - (h) In python, what happens when a global variable and a local variable share the same name ?
 - (i) "List is mutable." - Justify with suitable example.
 - (j) What are the different types of methods in a class ? **10×1=10**

Unit I

2. (a) Explain in detail about the various operators in python with suitable examples. 5
- (b) Discuss the relation between tuples and lists, tuples and dictionaries in detail. Explain the functions related to tuple and list. 5
3. Explain the syntax and structure of the following built-in functions in python :
- (i) input, (ii) eval, (iii) id, (iv) print, (v) type, (vi) round, (vii) min and max, (viii) bytearray, (ix) bytes, (x) filter. 10

Unit II

4. (a) Explain the need for continue and break statements. Write a program to check whether a number is prime or not. Prompt the user for input. 5

(b) Write a Python program to find reverse of given number using user defined function. 5

5. (a) What types of parameters passing are used in Python ? Justify your answer with sample programs. 5

(b) Illustrate the different types of control flow statements available in Python with flowcharts. 5

Unit III

6. (a) Write Python program to sort words in a sentence in decreasing order of their length. Display the sorted words along with their length. 6

(b) For `a = ['hello', 'how', [1,2,3], [[10, 20, 30]]]` what is the output of the following statements : 4

(i) `print(a[: :])`

(ii) `print(a[-3][0])`

(iii) `print(a[2][:-1])`

(iv) `print(a[0][-1])`

7. (a) Write a python program to read n integers into a list and separate the positive and negative numbers into two different lists.

5

- (b) Using string slicing operation write python program to reverse each word in a given string (eg : input : "hello how are you", output : "olleh woh era uoy").

5

Unit IV

8. (a) Create a class employee with data members: name, department and salary. Create suitable methods for reading and printing employee information.

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- (b) How to draw polygon with python ? Explain with a sample program.

5

9. (a) How do you play and stop audio in Python ? Explain with a sample program.

6

(b) Demonstrate the following built-in functions :

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- (i) `hasattr(obj, name)`
- (ii) `getattr(obj, name[, default])`
- (iii) `setattr(obj, name, value)`
- (iv) `delattr(obj, name)`