

B. Sc. DEGREE END SEMESTER EXAMINATION - OCT. 2020 : FEBRUARY 2021**SEMESTER - 1: COMPUTER APPLICATIONS (CORE COURSE)****COURSE: 19U1CRCAP2 – PROGRAMMING IN PYTHON***(Common for Regular 2020 admission & Improvement /Supplementary 2019 admission)*

Time: Three Hours

Max. Marks: 75

PART A*Answer **All** questions in one sentence each. Each question carries 1 mark.*

1. What is an interpreter?
2. What is a flowchart?
3. What is the output of `print str[2:]` if `str = 'Hello World!'`?
4. How can you get all the values from a dictionary dict?
5. Name the string function in which first characters of all the words are capitalized.
6. What is the output of `['Hi!'] * 4`?
7. What is the output of `L[-2]` if `L = [1,2,3,4,5]`?
8. How will you reverse a list?
9. Name two identity operators.
10. What is the output of `print(tuple[2:])` if `tuple = ('abcd', 786 , 2.23, 'john', 70.2)`? (1 x 10 =10)

PART B*Answer **any eight** questions in one or two sentences. Each question carries 2 marks.*

11. What is the difference between tuples and lists in Python?
12. What is a Python dictionary?
13. What is the purpose of `//` operator?
14. What is the purpose `continue` statement in Python?
15. How will you generate random numbers in Python?
16. What are frozensets?
17. Write a lambda function to filter out all odd items from a list.
18. What is recursion?
19. How will you print current date and time in Python?
20. What is the purpose of `readlines()` method in Python? (2 x 8 = 16)

PART C*Answer **any five** questions. Each question carries 5 marks.*

21. Explain the concept of mutable and immutable objects.
22. Write a program to find the sum of all items in a list received from the user.
23. Explain how will you define and call a function in Python.
24. Explain variable length arguments in Python function.
25. Explain different types of import statements in Python.

26. Write a Python function to generate all the factors of a number. Call the function to return all the factors of a number.
27. Explain nested loops with an example. (5 x 5 = 25)

PART D

*Answer **any two** questions. Each question carries **12** marks.*

28. Explain **for loop** and **for loop with else** with explanation and example programs.
29. Write a Python function to check whether a number is prime. Import the module to find the prime numbers between 2 limits.
30. Explain different modes for opening a file.
31. Write a program to copy a text file to another. (12 x 2 = 24)
