SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)
(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai — 600 044.
B.Sc.(CS) END SEMESTER EXAMINATIONS APRIL-2023
SEMESTER - III
**21UCSCT2003 - Programming Using Python**

Total Duration : 2 Hrs 30 Mins. Total Marks : 60

## Section B

Answer any **SIX** questions $(6 \times 5 = 30$ Marks)

1. Which of the following is invalid variable name and why?
BASICSALARY _basic basic-hra # MEAN group. 422 pop in 2020 over time
mind over matter SINGLE hELLO queue. team's victory Plot # 3 2015_DDay

2. Explain the concept of console input in python with example.

3. Write a Python program to perform the following operations:
(i) Pack first 10 multiples of 10 into a tuple
(ii) Unpack the tuple into 10 variables, each holding 1 value
(iii) Unpack the tuple such that first value gets stored in variable $x$, last value in
$y$ and all values in between into disposable variables
(iv) Unpack the tuple such that first value gets stored in variable $i$, last value in
$j$ and all values in between into a single disposable variable

4. What are dictionaries? Explain the following:
(i) Accessing Dictionary Elements
(ii) Looping in Dictionaries
(iii) Basic Dictionary Operations

5. Explain the different types of arguments in python with simple examples.

6. Write a python program to get a list of built-in functions.

7. Which operators can overload in python? Explain the concept of
operator overloading in python.

8. What is an exception? How do with exceptions in python?

## Section C

Answer any **THREE** questions $(3 \times 10 = 30$ Marks)

9. Demonstrate how to create simple and multi-line strings and whether a string
can change after creation. Also show the usage of built-in functions len( ),
min( ) and max( ) on a string.

**C**ontd...

10. Perform the following operations on a list of numbers.
    (i) Create a list of 5 odd numbers
    (ii) Create a list of 5 even numbers
    (iii) Combine the two lists
    (iv) Add prime numbers 11, 17, 29 at the beginning of the combined list
    (v) Report how many elements are presentin the list
    (vi) Replace last 3 numbers in the list with 100, 200, 300
    (vii) Delete all the numbers in the list - Delete the list

11. Examine the concept of lambda functions in python with example.

12. Define a class Shape. Inherit two classes Circle and Rectangle. Check programmatically the inheritance relationship between the classes.Create Shape and Circle objects. Report of which classes are these objects instances of.

13. Write a program to read the contents of file 'messages' one character at a time. Print each character that is read.

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