A

Reg. No. :

Answer All Questions

PART A - (10 x 1 = 10 Marks)

1. What is the output of the following code?   CO1-App
    >>> float("123" * int(input('Enter a Number:')))
    Enter a Number: 3
    (a) "123123123"   (b)"369.0"   (c) 369.0   (d) 123123123.0

2. How many times "executed" will be printed in the output?   CO1-App
    for variable_1 in range(1,5,-1):
    print("executed")
    (a) 0   (b) 5   (c) 1   (d) 4

3. What will be the output of the following Python function?   CO2-App
    s=len(["hello",2, 4, 6])
    print(s)
    (a) 6   (b) 4   (c) 3   (d) Error

4. Which of the following is not a core data type in Python Programming?   CO1-U

    (a) List   (b) Tuple   (c) Dictionary   (d) Class

5. What is the output of the following program?   CO3-App
    z = lambda x : x * x
    print(z(6))
    (a) 6   (b) 36   (c) 0   (d) Error

6. What is the output of the following program? CO3-App

```
def fun(i,j):
  if(i==0):
     return j
  else:
     return fun(i-1,j+1)
print(fun(4,8))
```

(a) 10   (b)11   (c) 12   (d) 13

7. Both the functions randint and uniform accept _____ CO4-App
parameters

(a) 0   (b) 1   (c) 3   (d) 2

8. What will be the output of the following Python code? CO4-App

random.randrange(0,91,5)

(a) 10   (b) 18   (c) 79   (d) 95

9. Which symbol is used for append mode? CO5-U

(a)ap   (b) a   (c) w   (d) app

10. Is seek ( ) method is used for random access to the file? CO5-U

(a) True   (b) False   (c) 0   (d) 1

PART – B (5 x 2= 10Marks)

11. List 6 features of python. CO1-U

12. Write a Python program to swap two values using tuple assignment. CO2-App

13. Write a program which can filter even numbers in a list by using filter CO3-App
function. The list is: [1,2,3,4,5,6,7,8,9,10].

14. Write a python program to print the current date and time using module? CO4-App

15. Differentiate between file modes rb+ and w+ with respect to Python. CO5-U

PART – C (5 x 16= 80Marks)

16. (a) (i) Write a python program to read the numbers until -1 is CO2-App (8)
encountered. Also count the negatives, positives and zeroes entered
by the user and find the average of positive and negative numbers.
(ii) Write a python program to calculate the roots of a quadratic CO2-App (8)
equation.

Or

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(b) (i) Write a python program to calculate tax given the following CO2-App (8)
conditions:
If income is less than Rs. 1,50,000, then no tax. If taxable income is
Rs. 1,50,001 – Rs. 3,00,000 then charge 10% tax. If taxable income
is Rs. 3,00,001 – Rs. 5,00,000 then charge 20% tax.
If taxable income is above Rs. 5,00,001 then charge 30% tax.

(ii) Write a python program to find the largest among 3 numbers. CO2-App (8)

17. (a) (i) Write a python program to demonstrate the use of del statement CO2-App (8)
and clear() function on dictionary.

(ii) Write a python program that has a dictionary of your friends CO2-App (8)
name(as keys) and their birthdays. Print the items in the dictionary
in a sorted order. Prompt the user to enter a name and check if it is
present in the dictionary. If the name does not exist, then ask the
user to enter DOB and get it updated in the dictionary.

Or

(b) (i) Write a Python program that takes a non-empty list of integers CO2-App (8)
and returns a list [pos,neg], where pos is the sum of squares of all
the positive numbers in l and neg is the sum of cubes of all the
negative numbers in l.

(ii) Write a program that creates two sets of even and composite CO2-App (8)
numbers separately in the range 1-20. Demonstrate the use of all(),
issupersset(),len(), and sum() functions on the sets.

18. (a) (i) Develop a Python program using functions that will compute CO2-App (8)
and print the area of any four geometric shapes. Write a main
function to get the input and invoke the function using conditional
statement.

(ii) Bala interested in developing a user defined function in python CO2-App (8)
program to calculate the length of a string without using a built-in
function

Or

(b) (i) Take an unknown number of positive integers as input. Assume CO2-App (8)
that the first number is always smaller than the second, all numbers
are unique and the input consists of at least three integers. Print the
second smallest integer.

(ii) Develop a Python program to find maximum of given three CO2-App (8)
numbers using parameter passing.

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19. (a) Build a Number Guessing Game using the following criteria: CO4-App   (16)
    a. Prompt the user selects the range
    b. Make the system to give to chances to guess the number
    c. If the guess is correct as the number predicted then print you won the game
    d. If the number is greater print your number is high and if the number is smaller your number is too small.
    e. If the chance exceeds Print the number and print Better Luck Next Time

Explain about the Modules used in the program.

Or

(b) A Student is instructed to write Assignment using Strings. He   CO2-App   (16)
names the variable as text and assigns the value as " Hello world".
He wishes to perform various operations as given below. Write a
python program to perform various operations given below?
    a. To convert the first character of string to capital letter and count the letters of the letter 'l' present in the string?
    b. To center the value of the string as #####Hello World####? and to center the value as ' Hello world'?
    c. To join the value of the string as H*e*l*l*o* *w*o*r*l*d and partition the value of string as ('Hello ', 'world', '')
    d. To replace the string of l by a and to fill the value of string as
    e. '000000000Hello world'?

20. (a) Write the use and syntax for the following methods with some   CO5-U   (16)
example code for each parts:
a) open()
b) read()
c) seek()
d) dump()

Or

(b) Differentiate between the following methods.   CO5-U   (16)
a) text file and binary file
b) readline() and readlines()
c) write() and writelines()
d) tell() and seek ()