SOUNDARYA CENTRAL SCHOOL

Affiliated to CBSE - New Delhi

Mid Term Examination- 2019-2020

Grade: XI   **Subject:** Computer Science (Code No-83)   Marks: 70

Duration: 3 hr

General Instruction:-
   a) **All sections are compulsory.**
   b) **Section A has 20 questions each carry 1 Mark.**
   c) **Section B has 9 questions with internal choices, each carry 2Marks**
   d) **Section C has 8 questions with internal choice, each carry 3Marks**
   e) **Section D has 6 questions with internal choices, each carry 5Marks**

_____

SECTION- A

1. Identify the membership operators.   **20 x 1 =20**

   a.is   b. not   c. and   d. not in

2. Which of the following is valid strings in Python ?

   a. "Hello"   b. Hello'   c "Hello'   d 'Hello"   e {Hello}

3. What is the output of math.ceil(4.4)?

   a. 5.0   b. 4   c. 4.0   d. 5

4. Identify the methods supported by data type Dictionary.

   a. max()   b. min()   c. values()   d. index()

5. The method removes and returns an element with a specified index or the last element is

   a. sort()   b. index()   c.pop()   d. none of these

6. The random module method that generates a random number between 0 and 1 is

   a. randrange()   b. randint()   c. random(0,1)   d. random()

7. The import is a

   a. Logical operator   b. constant   c. identifier   d. Keyword

8. In Python the term used to describe a library of codes is called as

   a. import   b. library   c. functions   d. module

9. The expression a= x^2 - x converted into Python expression using math module is

   a. math.power(x,2) - 2   b. a= x ** 2 - x   c. math.pow(x,2) - 2   d. All of these

10. The output of the following code is
```
a=[5,10,15,20,25]
k = 1
m = a[k+1]
print(m)
```
   a. 10   b. 20   c.15   d. 5

11. "Mid" + "Term" the output is_____

12. What will be the output of the following code
```
#print("Such as")
print("Take every chance.")
print("Drop every year")
```

13. _____ is the basic building blocks of Python programming language which are used to write program statements.

14. z=[7,5,8, 'num', '9' , '8'] the output for statement print(z[:]) is _____

15. What is the output of following code?
   >>> (1,) * 3

16. Tuples are represented using parentheses _____

17. Write a statement to convert the list x=['a','b,'c','d'] into tuples

18. A= "blog editors" write the correct statement to display only string "ditors"

19. How to write single line comments in Python?

20. Explain the working of below statement
   print("Hello" , end= ' ')

SECTION - B

1. State the basic rules to declare variables in Python.   **7 x 2 =14**
                   (Or)
   What are L-values and R-values?

2. Differentiate between local and global variable.

3. What is algorithm and flowchart?

4. List common Python built-in Exception.
                (or)
   Define breakpoint?. How breakpoint is inserted?

5. Differentiate between list and tuples.

6. Define sorting.What are the different ways of sorting?

7. Convert the mathematical expression into equivalent Python expression. Assume that math library has been imported.

$$x=\sqrt{xcos(a) + rsin(b)}$$

SECTION -C   7 x 3= 21

1. A= [1,78,25,34,58,66] . Write a program to find the mean,median and mode using math module.

2. List and explain three pdb commands in Python.

3. Given dictionary city={ 5: "Bengaluru", 1: "Delhi", 2: "Mumbai" , 3: "Chennai" , 4: "Kolkata"}
    Write the dictionary methods used to
    i)   print value of key : 3
    ii) print only keys
    iii) Find length of dictionary.

4. Define string. Can you sort a list which contains both numeric and string data. If No, justify

5. Explain the working of following Python statements.
      i) *>>>x = 10*
        >>> z = str(x).

      ii) *>>>Str = ("Python" , "Programming")*
        >>> list(str).

      iii) *st = " Vowels"*
         i= len(st)
         s = " "
        while(i != 0):
              s= s + st[i-1]
              i = i - 1
      print(s)

6. Define Sorting. Write an algorithm for Bubble Sort.
                                   (or)
    Write a program to convert swap the cases of given string without using swapcase() string method.

7. Write a program to find the factorial of a given number.

SECTION- D   5x 3= 15

1. Write an algorithm and program to perform insertion sort in the given unsorted list.
                                   (or)
2. Write a flowchart and program to perform Bubble sort in the given unsorted list.

3. Consider the list = [54,33,23,15]. Show all the steps of performing Bubble Sort

(or)

4. Consider the list = [26,19,78,15,10] . Show all steps of performing Insertion Sort.

5. Explain the different types of tokens in Python .

(or)

Explain any five methods with examples used on list data type

6. Identify the missing statements in the below program which accepts 10 integer values and search a particular value and it position in the list. Rewrite the correct code.

```
i=0
num=[ ]
print("Enter the values for list")

while(i<10):
    n=int(input())
    _____
    _____
print("Enter the search value")
    _____
i=pos=0
while(i<10):
    if(num[i]==val):
        _____
        break
    i+=1
    _____
    print("The integer is at postion", pos)
else:
    print(" The integer is not found")
```

(or)

Identify the error if any and write the correct program

```
Import math
a = int("enter the value of a:")
r = input("enter the value of r:")
n=int(input("enter the value of n")
while(i<=n)
        w = math.pow(r,i)
        s = s + √(a − r)
        i= i+1
    print(s)
```