NAAHAR PUBLIC SCHOOL (CBSE) SENIOR SECONDARY, VILLUPURAM
ACADEMIC YEAR (2022-2023)
HALF-YEARLY EXAMINATION

CLASS: XI **MARKS: 70**
SUB: INFORMATICS PRACTICES(065) **DUR: 3Hrs**
SUB TEACHER: Mrs.DHIVYA.N **DATE:20.12.2022**

I. MCQ **20 X 1 =20**

1. What will be the output of the following Python code?

```
i=0
while i<3:
    print(i)
    i +=1
else:
    print(0)
```

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

2. Which of the following commands will create a list?
a) list1 = list() b) list1 = [] c) list1 = list([1, 2, 3]) d) all of the mentioned
3. Suppose list1 is [2445,133,12454,123], what is max(list1)?
a) 2445 b) 133 c) 12454 d)123
4. Suppose list1 is [1, 5, 9], what is sum(list1)?
a) 1 b) 9 c) 15 d) Error
5. Suppose list1 is [2, 33, 222, 14, 25], What is list1[-1]?
a) Error b) None c) 25 d) 2
6. Which of the following is a Python tuple?
a) [1, 2, 3] b) (1, 2, 3) c) {1, 2, 3} d) {}
7. What will be the output of the following Python code?

```
>>>t=(1,2,4,3)
>>>t[1:3]
```

a) (1, 2) b) (1, 2, 4) c) (2, 4) d) (2, 4, 3)

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

```
>>> a=(1,2,(4,5))
>>> b=(1,2,(3,4))
>>> a<b
```

a) False b) True
c) Error, < operator is not valid for tuples
d) Error, < operator is valid for tuples but not if there are sub-tuples

9. What will be the output of the following Python code?

```
>>> a=(1,2,3,4)
>>>del(a[2])
```

a) Now, a=(1,2,4) b) Now, a=(1,3,4)
c) Now a=(3,4) d) Error as tuple is immutable

10. Is the following Python code valid?

```
>>> a=(1,2,3,4)
>>>del a
```

a) No because tuple is immutable b) Yes, first element in the tuple is deleted
c) Yes, the entire tuple is deleted d) No, invalid syntax for del method

11. What will be the output of the following Python function?

```
sum(2,4,6)
sum([1,2,3])
```

a) Error, 6 b) 12, Error c) 12, 6 d) Error, Error

12. What will be the output of the following Python function?

```
complex(1,2)
```

a) Error b) 1 c) 2j d) 1+2j

13. The function divmod(a,b), where both 'a' and 'b' are integers is evaluated as:
a) (a%b, a//b) b) (a//b, a%b) c) (a//b, a*b) d) (a/b, a%b)
14. Which of the following functions accepts only integers as arguments?
a) ord() b) min() c) chr() d) any()
15. What will be the output of the following Python function?

```
hex(15)
```

a) f b) 0Xf c) 0Xf d) 0xf

16. What will be the output of the following Python function?

```
len(["hello",2,4,6])
```

a) 4 b) 3 c) Error d) 6

17. Study the following function:

round(4.576)

What will be the output of this function?

a) 4 b)5 c)576 d)5

18. Bitwise _____ gives 1 if either of the bits is 1 and 0 when both of the bits are 1.

a) OR b) AND c) XOR d) NOT

19. What will be the value of the following Python expression?

```
4+2**5//10
```

a) 3 b) 7 c) 77 d) 0

20. When the given code is executed how many times ' 'you are learning python ' ' will be printed.

```
a = 0
while a<10:
… print("you are learning python")
… pass
```

a. 9 b. 10 C. 11 D - Infinite number of times

II. VERY SHORT ANSWER **15 X 1 = 15**

21. What are the two basic modes available for writing a program in Python IDLE?
22. What is token?
23. What is the use of None in Python?

Write the corresponding Python assignment statements:

24. Assign the average of values of variables length and breadth to a variable sum.
25. Assign the strings ‘Mohandas’, ‘Karamchand’, and ‘Gandhi’ to variables first, middle and last.
26. Assign the concatenated value of string variables first, middle and last to variable fullname. Make sure to incorporate blank spaces appropriately between different parts of names.

Give the output of the following when num1 = 4, num2 =3, num3 = 2

27. num1 += num2 + num3

    print (num1)

28. num1 = int(‘3.14’)

    print (num1)

29. Write a program to repeat the string “GOOD MORNING” n times. Here n is an integer entered by the user.
30. Find the output of the following program segments:

    a) for i in range(20,30,2):

        print(i)

31. _____ involves the licensure of a software application to customers. Licenses are typically provided through a pay-as-you-go model or on-demand.
32. _____involves a method for delivering everything from operating systems to servers and storage through IP-based connectivity as part of an on-demand service.
33. In which service user can install and execute an application without worrying about the underlying infrastructure and their setup?
34. Which mission is a robotic space mission to study about the planet Mars?

35. _____adds digital elements to a live view often by using the camera on a smartphone.

III. SHORT ANSWER (any 10) 10 X 2 =20

36. What factors guide the choice of identifiers in program?

37. Differentiate between an expression and a statement.

38. WAP to read a number in n and prints n2, n3, n4

39. What is the error in following code. Rewrite the correct code.

```
weather='raining'
if weather='sunny':
    print('wear sunblock')
elif weather='snow':
    print('Going skiing')
else:
    print("None of the above")
```

40. What is the syntax of if-elif statement in Python?

41. What will be the output of the following ?

```
print(17//4)
print(17/4)
print(len(str(17//4)))
print(len(str(17/4)))
```

42. Write the following expression in python.

(a) $\frac{1}{3}b^2h$ (b) $d = \sqrt{(x2-x1)^2 + (y2-y1)^2}$ (c) $x = \frac{-b \pm \sqrt{b^2-4ac}}{2a}$ (d) $a^n \times a^m = a^{n+m}$

43. Write a Program to print table of a number , say 5 with output

44. Differentiate between cloud computing and grid computing with suitable examples.

Justify the following statement:

"Storage of data is cost-effective and time saving in cloud computing."

45. Define block chain technology.

46. How are IoT and WoT related?

47. What is accelerometer and gyroscope?

IV. LONG ANSWER (any 2) 3 X 5 =15

48. What is block/code block/suit in Python?Explain with example program.

49. WAP to find minimum element from a list of elements along with its index in the list.

50. Explain the following along with their applications.

a) Artificial Intelligence

b) Machine Learning