THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

SAMPLE QUESTION PAPER (2023-2024)

CLASS: XI

SUBJECT: COMPUTER SCIENCE SUBMISSION DATE: 04-09-23

Time Allotted: 3 HRS Max Marks: 70

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Q35 against part c only.
8. All programming questions are to be answered using Python Language only.

Section-A

1. Which of the following identifier names are invalid and why?
   (i) Serial_no (ii) Total_Marks (iii) 1st_Room (iv) total-Marks
   (v) Hundred$ (vi) _Percentage (vii) Total Marks (viii) True

2. State True or False:
   "In a Python program, if a break statement is given in a nested loop, it terminates the execution of all loops in one go."

3. Consider the given expression:
   not True and False or True
   Which of the following will be correct output if the given expression is evaluated?
   (i) True (ii) False (iii) NONE (iv) NULL

4. Which of the following are valid operator in Python:
   (i) */ (ii) is (iii) ^ (iv) like

5. Identify the mutable data types?
   (i) List (ii) Tuple (iii) Dictionary (iv) String

6. Which statement is/are not correct (assuming x is already defined):
   (i) The statement x += 10 is a valid statement.
   (ii) The statement x + 10=x is a valid statement.
   (iii) The statement x =+10 is a valid statement.
   (iv)The statement x = x + 10 is a valid statement.

7. Assertion: If the condition of the while loop is initially false, the body is not executed even once.
Reason: During the execution of while loop, body of the loop gets executed only when loop condition becomes true.
   (i) Both Assertion and Reason are True and Reason is the correct explanation of Assertion.
   (ii) Both Assertion and Reason are True and Reason is not the correct explanation of Assertion.
   (iii) Assertion is True, but Reason is False.
   (iv) Assertion is False and Reason is True.

8. What will be the output of the following code?
```
x,y=2,6
x,y=y,x+2
print(x,y)
```
9. Differentiate between break and continue statements using examples.
10. What is an infinite loop? Give one example.
11. What is the output when following statement is executed ?
```
>>>"a"+"bc"
```
a) a b) bc c) bca d) abc

12. Write the output of following code.
```
str=”Welcome”
str[2]=’a’
print(str)
```
a. Weacome b. Error c. aWelcome d. Welcomea

13. Consider the following string myAddress:
```
myAddress = "WZ-1,New Ganga Nagar,New Delhi"
```
What will be the output of following string operation
```
print(myAddress.upper())
```

Section-B(2 marks)

14. Write the output from the following code:
```
Sum = 0
for i in range(1,11,2):
    Sum+=i
print ("SUM = ", Sum)
```

15. Write the output from the following code:
```
Sum = 0
i = 4
while (i<=20):
    Sum+=i
    i+=4
print("Sum = ",Sum)
```

16. Rewrite the following for loop into while loop:
```
for a in range(25,500,25):
    print(a)
```

17. Rewrite the following while loop into for loop:

```
i=10
while i<250:
    print(i)
    i=i+50
```

18. Write logical expressions corresponding to the following statements in Python and evaluate the expressions (assuming variables num1, num2, num3, first, middle, last are already having meaningful values):
(i) The sum of 20 and –10 is less than 12.
(ii) num3 is not more than 24.

19. What will be the output of the following statement:

```
print(3-2**2**3+99/11)
```

20. What will the following expression be evaluated to in Python?

```
print(15.0 / 4 + (8 + 3.0))
```

21. Evaluate the following expressions:
(i) 12*(3%4)//2+6
(ii) not 12 > 6 and 7 < 17 or not 12 < 4
22. Write the output of the following python statements:
(i) print(2 + 3*4//2 - 4)
(ii)print(10%3 – 10//3)
23. Rewrite the following code in Python after removing all syntax error(s). Underline each correction done in the code.

```
Y=integer(input("Enter 1 or 10"))
if Y==10
for Y in range(1,11):
    print(Y)
else:
    for m in range(5,0,-1):
        print(thank you)
```

Section-C(3 MARKS)

24. Write a program to input any number and to print all natural numbers up to given number.

25. Write a program to input any number and to find sum of all natural numbers up to given number

26. Write a program to input any number and to find reverse of that number.

27. Write a program to input any number and to check whether given number is Armstrong or not.
(Armstrong 1,153,etc. $1^3 = 1$, $1^3+5^3+3^3 = 153$)

28. Write a program to input employee no, name basic pay and to find HRA, DA and netpay.

Basic pay	Hra	Da
>100000	15%	8%
<=100000&>50000	10%	5%
<=50000	5%	3%

29. Write a program to find all prime numbers up to given number.

30. Write a program to input username and password and to check whether the given username and password are correct or not.

31. Write a program to generate the sequence: –5, 10, –15, 20, –25….. up to n, where n is an integer input by the user.

SECTION D(4 MARKS)

32. Consider the following string mySubject:

mySubject = "Computer Science"

What will be the output of the following string operations:-

i. print(mySubject[0:len(mySubject)])
ii. print(mySubject[-7:-1])
iii. print(mySubject[::2])
iv. print(mySubject[len(mySubject)-1])
v. print(2*mySubject)
vi. print(mySubject[::-2])

33. Write a program for string traversal(string --“hello”)and write the output.

34. Write a menu driven program that has options to

• accept the marks of the student in five major subjects in Class X and display the same.
• calculate the sum of the marks of all subjects. Divide the total marks by number of subjects (i.e. 5), calculate percentage = total marks/5 and display the percentage.