Class: XI
Subject: COMPUTER SCIENCE

Maximum Marks: 70   **Time : 3 hours**

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Note: (i) All questions are compulsory.
(ii) Answer the questions after carefully reading the text.
(iii) Marks of each question are given against it.
(iv) Marks will be given for good hand writing.

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Q 1. Answer the following questions based on Python Programming and Computational Thinking:

i)	What is difference between an interpreter and a compiler?	2
ii)	What do you mean by Literals? Explain with example.	2
iii)	Arrange the following memory units in ascending order of their size	2

   Byte, kilo byte, tera byte, peta byte, nibble, bit, giga byte, zetta byte

iv)	What are the basic Units of computer? Explain the functions of each unit briefly.	2
v)	Explain the use of %(modulas) operator and = = operator with example.	1
vi)	What is cloud computing and what are its types?	2
vii)	What are the advantages and disadvantages of Python programming language?	2
viii)	Expand DRAM?	1
ix)	What are jump statements in Python? Name and state the purpose of each?	2

Q 2 i) What is the role of a comment in a comment in a program ? Is it necessary to comment every

   line of code?   **2**

   ii) Name the function/method required to: **2**

              (a) Check if a string contains only alphabets.

              (b) Give the total length of the list.

   iii) What do you mean by Logical errors with an example?   **2**

   iv) Which of the following are invalid identifiers?   **2**

              (1) Myfile (2) _abc (3) As$swer (4) 99flag

   v) What is Type casting? Elaborate with example.   **2**

   vi) Define sort? Elaborate with an example.   **2**

   vii) Write a python statement to assign the values " Periodic Test", " CS", "XI" to Variables

      Exam, sub, clss   **2**

   x)   Explain the following terms: (i) Assembler (ii) Compiler (iii) Interpreter   **3**

Q 3 i) Draw a flowchart that print the smallest of three given no.   **2**

ii) Write a program to generate the following series.   **2**

```
1 2 3
1 2 3
1
```

iii) Give the output of the following python statements.   **2**

```
y=5
for i in range(1,3):
    for j in range(0,i):
    z=i+j-1
    if(z%2)==0:
    y=y+z
    elif(z%3)==0:
    y=y+z-2
    print("y=",y)
```

iv) Write the output of the following: **2**

```
L=[10,20,30,40]
L1=[500,600]
L2=[35,45]
L1.extend(L2)
L.insert(25,2)
print(L1+L2)
print(L1)
print(L.index(30))
print(L2*2)
```

v) Write will be the output of the following python code, justify your answer.   **2**

```
x=5
y=0
print('A')
try:
print('B')
A=x/y
print('C')
except ZeroDivisionError:
print('F')
except:
print('D')
finally:
print('Over')
```

Q 4 i) Write a Python program to read (using input function) details like NAME, CLASS, AGE of a student and display the details on screen?   **3**

ii) Write a Python program to display the following pattern using loop statements?   **4**

```
A
A B
A B C
A B C D
A B C D E
```

   iii) Write a program in Python to find out simple interest if Principle amount, rate and time   3
are input form keyboard.

iv) Write a program in Python to calculate area and circumference of circle. If radius of
circle input by user through keyboard.   3

Q 5 Answer the following questions based on Society, Law and Ethics.

(i) What is cyber safety? Why is it important?   2
(ii) What is private browsing? Why is it considered a better way of browsing the internet?   2
(iii) Define the following terms: 2
(a) Digital footprint
(b) Cookies

(iv) What is a computer virus? How can it affect your computer?   2
 (v) Differentiate between http and https.   2

Q 6 Consider the table EXAM given below. Write commands in MySql for(i)to (iv) and output for (v) to
(vii).   6

Table: EXAM

No	Name	Stipend	Subject	Average	Division
1	Karan	400	English	68	FIRST
2	Aman	680	Mathematics	72	FIRST
3	Javed	500	Accounts	67	FIRST
4	Bishakh	200	Informatics	55	SECOND
5	Sugandha	400	History	35	THIRD
6	Suparna	550	Geography	45	THIRD

(i) To list the names of those students, who have obtained Division as FIRST in the ascending
order of NAME.
(ii) To display a report listing NAME, SUBJECT and Annual stipend received assuming that the
stipend column has monthly stipend.
(iii) To count the number of students, who have either accounts or informatics as subject.
(iv) To insert a new row in the table EXAM: 6,"Mohan",500,"English",73,"Second"
(v) SELECT AVG(Stipend) FROM EXAM WHERE DIVISION="THIRD"
(vi) SELECT COUNT(DISTINCT Subject) FROM EXAM;
(vii) SELECT MIN(Average) FROM EXAM WHERE Subject="English";