| Roll Number | | | |

INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION
COMPUTER SCIENCE

CLASS: XI   Sub. Code: 083   Time Allotted: 3 Hrs

24.09.2019   Max. Marks: 70

General Instructions:
- All questions are compulsory.
- Please check that this question paper contains 3 printed pages.
- Please check that this question paper contains 7 questions with subparts.
- All questions related to programming are based on PYTHON.

1 a	Name the basic units of Computer along with its sub units.	1
b	What is Application software? Name its type.	2
c	What is public cloud computing?	1
d	Arrange the memory units from smallest to biggest : Giga Byte, Kilo Byte, Tera Byte, Megabyte.	2
e	Distinguish between internal and external memory.	2
2 a	Give duals for the following : i. X'Y+XY+XY' ii. (A+0).(A.1.A')	2
b	Design a logic circuit for the expression: F(X,Y,Z)=(X+Y).(Y'.Z')(X.Z)	2
c	State and prove the Absorption law with the help of truth table .	3
3 a	Write the full form of ISCII.	1
b	Write the next four terms for the HEXADECIMAL number series - 79,80.	1
c	Convert the binary number 110011010 to HEXADECIMAL and OCTAL.	2
d	Convert the following as instructed : i. $(11001110.10)_2 = (\ \ )_{10}$ ii $(FACE)_{16} = (\ \ )_2$	2
e	Add the binary numbers 100111 and 110011.	2
f	Draw a flow chart to print whether a given number is positive or negative.	2
4 a	Define a KEYWORD in python.	1
b	Identify the valid and invalid identifiers from below: i. Input ii. RNO2 iii. while iv. S.NO	1
c	What is the use of else clause in python loops. Give example.	2
d	What is the difference break and continue statement? Explain with an example.	2

e   Evaluate and give the result :   2

      i)   not(True and True)

      ii) (15>10) or (10<5) or (True and not 0==0)

f   Give the output for the following code snippet: 2

```
x=20
x=x+5
x=x-10
y,y=x,x+10
print (x,y)
x,y=x-1,50
print (x,y)
```

5 a   How are these numbers different from one another : 23, 23.0, 23j, "23"   1

b   Will the following code produce any result. Justify your answer.   1

```
x= "MyPython"
y=2
print (x+y)
```

c   Write the output for the following Python code: 2

```
x=32
y=0
while x>y:
    x=x-4
    y+=4
    print(x,end=' ')
```

d   Find errors in the following code (if any) and correct it. Rewrite the correct code.   2

```
i.   a,b,c= 10,20,4
     x=a+bc+ a*c
ii.  age=input("Enter age")
     if age>18:
         print("Major")
     elif age <  18:
         print("Senior")
     else
         PRINT("Minor")
```

e   Write the output for the following Python code: 2

```
a=[8,16,24]
b=[4,5,6]
c=a+b
d=c[2:5]
c[5]=a[2]
c[1]=2
print(c)
print(d)
```

f   Consider the following Python program and convert it to for loop without changing the output   3
    values. Also give the output for the following code snippet:

```
N= 20
i=1
sum = 0
```

```
while i<N:
    if i%2==0:
        sum = sum+i
    i= i+3
print(sum)
```

6 a   What is the difference between an error and exception? Name any two exceptions in python.   3

b   WAP to print the following using nested loop   3
#####
####
###
##
#

c   Write the output of the following code :   3
```
x=0
for i in range(0,5,2):
    for j in range (0,i):
        x=x+ (i+j-1)
        print(i,"@",j)
print(x)
```

d   Why lists are called mutable? Explain with an example. Write the output of the following   3
code:

```
L=['F','R','I','E','N','D','S']
x=len(L)
for a in range(0,x,2):
    print("Value at ", a ," and the element at ", a-x ," is ", L[a] )
```

7 a   WAPP input an integer N from the user. Check whether it is Perfect number or not and print   4

it.

b   WAPP to accept name, monthly salary from the user and display income tax with the help of   4

the following table :

Monthly salary	Income tax
69000 or more	20 % of monthly salary
47500-68999	15 % of monthly salary
47499 or less	10 % of monthly salary

c   WAPP input the value of N and print the following Fibonacci series :   4

0 1 1 2 3 5 8 13..... upto 'N'.

End of the Question Paper