INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION
COMPUTER SCIENCE

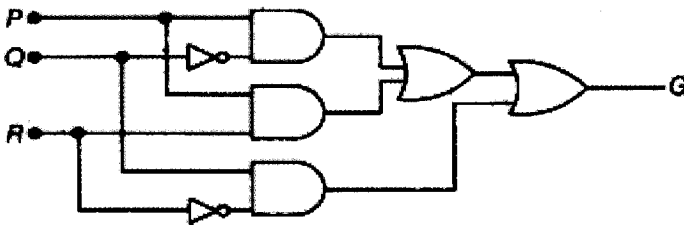CLASS: XI   Sub. Code: 083   Time Allotted: 3 Hrs

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   Explain two functions of ALU.   1

b   What is system software?   1

c   Name any four secondary storage media.   2

d   What is an operating system? Name any two types of OS.   2

e   Differentiate between Compiler and Interpreter.   2

2 a   Give duals for the following :   2

     i. $X'Y+XY+XY'$ ii. $(A+0).(A.1.A')$

b   Write the Boolean expression for the given logic circuit: 2

c   State and prove the Distributive Law with the help of truth table.   3

3 a   Write the full form of ASCII.   1

b   Write the next four terms for the Octal number series - 75,76   1

c   Convert the binary number 1010010110011 to HEXADECIMAL and OCTAL.   2

d   Convert the following as instructed :   2

     i. $(567)_{10}$ = ( )$_2$ ii $(452)_8$ = ( )$_{10}$

e   Add the binary numbers 110011 and 100111   2

f   Draw a flowchart to print sum of first 10 natural numbers   2

4 a   Define a token in Python.   1

b   Identify the valid and invalid identifiers from below: 1

        i.   _CHK MYFILE   ii. 20CLT   iii. Print   iv. RNO#

c   Explain the two types of comments in python with an example.   2

d   What is the difference break and continue statement? Explain with an example.   2

e   What is the use of range( ) function? Explain with example.   2

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   Define type casting.   1

b   The below python code causes an error. Rectify the error :   1

>>>answer="Hello"+1

c   Write the output for the following code: 2

```
x=30
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.   x+1=x
   ii.  code=input("Enter any character ")
        if code==W:
           print(" WINTER SEASON")
           elif code=R:
           print("RAINY SEASON")
        else
        PRINT("ENJOY")
```

e   Find the errors in the following code if any and correct code by rewriting code and underline   2

the corrections :

```
x=int("Enter the Value of x : "))
for in range [0,11]:
   if x=y:
      print(x+y)
   else:
```

```
print(x-y)
```

f   Convert the following FOR loop into WHILE loop :   3

```
for k in range (10,20,5):
    print (k)
```

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

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

c   Write logical expression and statements for the following :   3

      i.   Either A is greater than B or A is less than C.

      ii. Place is either Delhi or Goa but not Jaipur

      iii. For loop to print first 10 even numbers

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

```
L=['R','E','S','P','E','C','T']
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 Palindrome or not and print it   4

(eg : 121 number which reads the same from left to right & right to left)

b   Write code in Python to accept name of an item, unit price, quantity and find Amount (unit   4

price * quantity). Find discount as given below:

Amount	Discount
>=10000	20%
>=5000 but <10000	15%
<5000	10%

Find net price as Amount – Discount. Display all details.

c   WAPP input an integer N from the user. Check whether it is prime number or not and print it.   4

End of the Question Paper