

**I UNIT TEST**  
**Class -XI**  
**Subject: Computer Science (083)**

**Time:90 min**

**MM:50**

Q. 1.

- a) Which is the fastest memory? Define. 1
- b) What is the difference between compiler and interpreter? 2
- c) Define following: 2
  - i. Operating System ii. Parallel Computing
- d) Write difference between SRAM and DRAM. 2
- e) State and Prove De-Morgan's law algebraically. 2
- f) Draw block diagram of computer. 1

Q. 2.

- a) Convert following :- 2
  - 1)  $(10110100)_2 = ( )_8$
  - 2)  $(2C9)_{16} = ( )_8$
- b) Write full form ASCII. 1

- c) Define proprietary software and write any two example . **1**
- d) What is data? What is output of data processing system? **1**
- e) What is bit? How bit, byte and nibble are related with each other? **2**
- f) What is application software? Write any two example. **2**

**Q. 3. 8 marks**

- a) What is the difference between a keyword and an identifier? **2**
- b) From the following, find out the valid identifier: **2**  
\_abc\_d, break, 1rak, doc14, a2bc5, \_punc, ray.dat
- c) What is None literal in python? **2**
- d) What will be the output produced by following code fragment? **2**  
x, y= 20, 60  
y, x, y=x, y-10, x+10  
print (x, y)

**Q. 4. 10 marks**

- a) What are data types? What are python's built in core data types? **2**
- b) What do you understand by term 'immutable'? Explain with a suitable example. **2**
- c) What will be the output of the following code and why? **2**  
a,b,c=0.1  
d=0.3  
e=a+b+c-d  
f=a+b+c==d  
print(e)  
print(f)
- d) What will be the output of following Python code? **2**  
a=12  
b=7.4  
c=1  
a-=b

```
print (a, b)
a*=2+c
print(a)
b+=a*c
print( b )
```

e) Write a program to determine if the number is even or odd. **2**

**Q. 5. 10 marks**

a) What is the output of the following lines of code? **2**

```
if int("zero") == 0 :
Print("zero")
elif str(0) == "zero":
Print (0)
elif str(0) == "0 ":
Print (str(0))
else:
Print("none of the above")
```

b) What is the output produced by the following code? **2**

```
x=1
if x>3:
if x>4:
printf("A",end=" ")
else:
print("B",end=" ")
elif x<2:
if (x!=0):
print("C", end=" ")
print("D")
```

c) Write a Python script to print Fibonacci series first 20 elements. Some initial elements of a Fibonacci series are: **3**

0 1 1 2 3 5 8 .....

d) Write programs using nested loops to produce the following patterns: **3**

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

**Q. 6. 12 marks**

a) Write a program to find the second largest number of a list of numbers. **3**

b) Identify the errors in the following code: **2**

```
i. L1 = [1,2,3,5] ii. L1 = [1,3,5,8]
An = L1.remove(7) An = L1.remove(8)
print(An + 2)
```

c) Find out the output of following code segment: **2**

```
numlist = [2,5,2,3,6,6,9]
pos=0
odds=evens=0
length=len(numlist)
while pos<length:
```

```

if numlist[pos]%2==0:
evens=evens+1
else:
odds=odds+1
pos=pos+1
if odds>evens:
print("Balanced oddity")

```

d) Write a program that reads a string and checks whether it is a palindrome string or not. **3**

e) Find the errors in the following code— **2**

```

s="PURA VIDA"
s1=s [ : 5]
s2=s [ 5 :]
s3=s1 * s2
s4=s2 + 3
s5=s1+3

```

**Q. 7. 10 marks**

a) What do you mean by Syntax errors and Semantics errors? Answer with example. **2**

b) How are tuples different from list when both are sequences? **2**

c) Consider the following code and then answer the question that follow— **4**

```

myDict={'a':27,'b':43, 'c':25, 'd':30}
valA=""

```

```

for I in myDict:
if I > valA
valA=i
valB= myDict[i]
print (valA) #Line1
print (valB) #Line2
print (30 in myDict) #Line3
myLst= (myDict.items())
myLst.sort()
print (myLst[-1]) #Line4

```

Write the output of the Line 1,2 ,3 and 4

d) What type of objects can be used as keys in dictionaries? Also explain why? **2**

Class -XI

MM: 70 Subject: Computer Science (083) Time:3 Hours

All questions are compulsory.

**Q. 1. 10 marks**

a) ..... A new age computer technology i.e., internet based and utilizes web based services whenever and wherever the users need it. **1**

b) Which is the fastest memory? **1**

c) What is the difference between compiler and interpreter? **2**

d) Define following: **2**

i. Operating System ii. Parallel Computing

e) Write difference between SRAM and DRAM. 2

f) Prove De-morgan's law using truth table. 2

Q. 2. 10 marks

a) Convert following 2

1)  $(101110)_2 = ( )_8$

2)  $(456)_8 = ( )_{16}$

b) Write full form of following 2

1) ASCII

2) ISCII

c) Define proprietary software and write any two example . 1

d) What is data? What is output of data processing system? 1

e) What is bit? How bit, byte and nibble are related with each other? 2

f) What is application software? Write any two example. 2

Q. 3. 8 marks

a) What is the difference between a keyword and an identifier? 2

b) From the following, find out the valid identifier: 2

`_abc_d`, `break`, `1rak`, `doc14`, `a2bc5`, `_punc`, `ray.dat`

c) What is None literal in python? 2

d) What will be the output produced by following code fragment? 2

```
x, y= 20, 60
```

```
y, x, y=x, y-10, x+10
```

```
print (x, y)
```

Q. 4. 10 marks

a) What are data types? What are python's built in core data types? 2

b) What do you understand by term 'immutable'? Explain with a suitable example. 2

c) What will be the output of the following code and why? 2

```
a,b,c=0.1
d=0.3
e=a+b+c-d
f=a+b+c==d
print(e)
print(f)
```

d) What will be the output of following Python code? 2

```
a=12
b=7.4
c=1
a-=b
print (a, b)
a*=2+c
print(a)
b+=a*c
print( b )
```

e) Write a program to determine if the number is even or odd. 2

Q. 5. 10 marks

a) What is the output of the following lines of code? 2

```
if int("zero") == 0 :
    Print("zero")
elif str(0) == "zero":
    Print (0)
elif str(0) == "0 ":
    Print (str(0))
else:
    Print("none of the above")
```

b) What is the output produced by the following code? 2

```
x=1
if x>3:
if x>4:
printf("A",end=" ")
else:
print("B",end=" ")
elif x<2:
if (x!=0):
print("C", end=" ")
print("D")
```

c) Write a Python script to print Fibonacci series first 20 elements. Some initial elements of a Fibonacci series are: 3

0 1 1 2 3 5 8 .....

d) Write programs using nested loops to produce the following patterns: 3

A

A B

A B C

A B C D

A B C D E

A B C D E F

Q. 6. 12 marks

a) Write a program to find the second largest number of a list of numbers. 3

b) Identify the errors in the following code: 2

i. L1 = [1,2,3,5] ii. L1 = [1,3,5,8]

An = L1.remove(7) An = L1.remove(8)

print(An + 2)

c) Find out the output of following code segment: 2

```
numlist = [2,5,2,3,6,6,9]
```

```
pos=0
```

```
odds=evens=0
```

```
length=len(numlist)
```

```
while pos<length:
```

```
if numlist[pos]%2==0:
```

```
evens=evens+1
```

```
else:
```

```
odds=odds+1
```

```
pos=pos+1
```

```
if odds>evens:
```

```
print("Balanced oddity")
```

d) Write a program that reads a string and checks whether it is a palindrome string or not. 3

e) Find the errors in the following code— 2

```
s="PURA VIDA"
```

```
s1=s [ : 5]
```

```
s2=s [ 5 :]
```

```
s3=s1 * s2
```

```
s4=s2 + "3"
```

```
s5=s1+3
```

Q. 7. 10 marks

a) What do you mean by Syntax errors and Semantics errors? Answer with example. 2

b) How are tuples different from list when both are sequences? 2

c) Consider the following code and then answer the question that follow— 4

```
myDict={'a':27,'b':43, 'c':25, 'd':30}
```

```
valA=?
```

```
for I in myDict:
    if I > valA
        valA=i
    valB= myDict[i]
    print (valA) #Line1
    print (valB) #Line2
    print (30 in myDict) #Line3
myLst= (myDict.items())
myLst.sort()
print (myLst[-1]) #Line4
```

Write the output of the Line 1,2 ,3 and 4

d) What type of objects can be used as keys in dictionaries? Also explain why? 2