



ANANDALAYA
PERIODIC TEST – 2
Class : XI

Subject: COMPUTER SCIENCE
Date : 20/12/2019

M.M: 40
Time: 2 Hour

Instruction: (1) All questions are compulsory.
(2) Programming language: **Python**.

- Q-1 (a) Which of the following are valid operators in Python: (2)
(i) ** (ii) */ (iii) like (iv) || (v) is (vi) ^ (vii) between (viii) in
- (b) Name the Python Library modules which need to be imported to invoke the following functions, also mention the use of this function: (2)
(i) lower() (ii) sqr()
- (c) Rewrite the following code In python after removing all syntax error(s). Underline each correction done in the code. (3)
25=Val
for I in the range(0,Val)
 if I%2==0:
 print I+1
 Else:
 print I-1
- (d) Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code. (2)
Data = ["A",20,"B",10,"C",30]
for C In Range(1,6,2):
 Add = Add + Data[C]:
 print (Add):
- (e) Find and write the output of the following python code: (3)
In="Python-2018"
Out=""
I=0
while I<len(In):
 if In[I]>="0" and In[I]<="9":
 Val = int(In[I])+1
 Out=Out + str(Val)
 elif In[I]>="A" and In[I] <="Z":
 Out=Out + (In[I+1])
 else:
 Out=Out + "*"
 I=I+1
print (Out)
- (f) Find and write the output of the following python code: (3)
def Convert(X=4,Y=3):
 X=X+Y
 Y=X-Y
 print (X,"&",Y)
 return X
A=25
B=15
A=Convert(A,B)
print (A,"&",B)
B=Convert(B)

```
print (A,"&",B)
```

- (g) Find and write the output of the following python code: (3)
- ```
Dig=[13,26,39]
for P in Dig:
 for N in range(1, P%6):
 print(N,"$",end="")
 print ("#",P)
```

- (h) What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the Minimum values that can be assigned to each of the variables From and To. (2)

```
import random
VAL=[15,25,35,45,55,65,75,85];
From=random.randint(1,3)
To =random.randint(1,4)
for I in range(From,To+1):
 print (VAL[I], "*")
```

1. 35 \* 45 \* 55 \* 65 \* 75 \*
2. 35 \* 45 \* 55 \*
3. 15 \* 25 \* 35 \* 45 \*
4. 35 \* 45 \* 55 \* 65 \*

- Q-2 (a) Consider the following tables. Write SQL commands for the statements (i) to (vii) and give outputs for SQL queries (vii) to (x) (10)

Table :Sender

| SenderId | SenderName | SenderAddress     | SenderCity |
|----------|------------|-------------------|------------|
| ND01     | R Jain     | 2, ABC Appts      | New Delhi  |
| MU02     | H Sinha    | 12, Newtown       | Mumbai     |
| MU15     | S Jha      | 27/A, Park Street | Mumbai     |
| ND50     | T Prasad   | 122-K, SDA        | New Delhi  |

Table : Recipient

| RecID | SenderId | RecName    | RecAddress             | RecCity   |
|-------|----------|------------|------------------------|-----------|
| K005  | ND01     | R Bajpayee | 5, Central Avenue      | Kolkata   |
| ND08  | MU02     | S Mahajan  | 116, A Vihar           | New Delhi |
| MU19  | ND01     | H Sing     | 2A, Andheri East       | Mumbai    |
| MU32  | MU15     | P K Swamy  | B5, C S Terminus       | Mumbai    |
| ND48  | ND50     | S Tripathi | 13, B1 D, Mayur Vihaer | New Delhi |

- (b) (I) To display the names of all Senders from Mumbai.  
 (II) To display the information of all the sender whose name starts with 'H'.  
 (III) To display the information of all the Recipient in Alphabetic order of their RecCity.  
 (IV) To display the RecID, SenderName, SenderAddress, RecName, RecAddress for every Recipient.  
 (V) To display Recipient details in ascending order of RecName.  
 (VI) To display number of Recipients from each city.  
 (VII) SELECT DISTINCT SenderCity FROM Sender;  
 (VIII) SELECT A. SenderName, B.RecName FROM Sender A, Recipient B WHERE A. SenderID = B.SenderID AND B.RecCity = 'Mumbai';  
 (IX) SELECT RecName, RecAddress FROM Recipient WHERE RecCity NOT IN ('Mumbai', 'Kolkata');  
 (X) SELECT RecID, RecName FROM Recipient WHERE SenderID='MU02' OR SenderID='ND50';

- Q-3 (a) Convert The following Decimal Number to binary (3)  
 (i)  $25_{10}$  (ii)  $42_{10}$  (iii)  $33_{10}$   
 (b) Convert The following Binary Number to Decimal Number System (3)  
 (i)  $1001010_2$  (ii)  $1000001_2$  (iii)  $1011110_2$   
 (c) Write a Short note on Unicode. (4)