Sample Question Paper - 2021
Computer Science – 083

MARKING SCHEME

Maximum Marks: 70
Time Allowed: 3 hours

<table>
<thead>
<tr>
<th>Part – A</th>
<th>Section - I</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 b) True</td>
<td>1</td>
</tr>
<tr>
<td>2 [6,82,5]</td>
<td>1</td>
</tr>
<tr>
<td>3 Comma Separated Value</td>
<td>1</td>
</tr>
<tr>
<td>4 c) **</td>
<td>1</td>
</tr>
<tr>
<td>5 b) T[2]= -29 (as tuple is immutable)</td>
<td>1</td>
</tr>
<tr>
<td>6 Day={1:'monday',2:'tuesday',3:'wednesday'}</td>
<td>1</td>
</tr>
<tr>
<td>7 30</td>
<td>1</td>
</tr>
<tr>
<td>8 abs()</td>
<td>1</td>
</tr>
<tr>
<td>9 SMTP</td>
<td>1</td>
</tr>
<tr>
<td>10 Cyber Stalking</td>
<td>1</td>
</tr>
<tr>
<td>11 ORDER BY</td>
<td>1</td>
</tr>
<tr>
<td>12 To check if the column has null value / no value</td>
<td>1</td>
</tr>
<tr>
<td>13 SUM / AVG / COUNT / MAX / MIN</td>
<td>1</td>
</tr>
<tr>
<td>14 b) ALTER</td>
<td>1</td>
</tr>
<tr>
<td>15 Microwave / Radio wave</td>
<td>1</td>
</tr>
<tr>
<td>16 d. List</td>
<td>1</td>
</tr>
<tr>
<td>17 puterSc</td>
<td>1</td>
</tr>
<tr>
<td>18 SHOW TABLES</td>
<td>1</td>
</tr>
<tr>
<td>19 Wireless Fidelity</td>
<td>1</td>
</tr>
<tr>
<td>20 (c) Primary Key</td>
<td>1</td>
</tr>
<tr>
<td>21 Bps, Kbps, Mbps, Gbps, Tbps</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part – A</th>
<th>Section - II</th>
</tr>
</thead>
<tbody>
<tr>
<td>22 (a) ItemNo</td>
<td>1</td>
</tr>
<tr>
<td>(b) Degree = 4   Cardinality = 7</td>
<td>1</td>
</tr>
<tr>
<td>(c) INSERT INTO store (ItemNo,ItemName,Scode) VALUES(2010, “Note Book”,25);</td>
<td>1</td>
</tr>
<tr>
<td>(d) DROP TABLE store;</td>
<td>1</td>
</tr>
<tr>
<td>(e) Describe Store;</td>
<td>1</td>
</tr>
<tr>
<td>23 (a) Line 1 : csv</td>
<td>1</td>
</tr>
<tr>
<td>(b) Line 2 : a</td>
<td>1</td>
</tr>
<tr>
<td>(c) Line 3 : reader</td>
<td>1</td>
</tr>
<tr>
<td>(d) Line 4 : close()</td>
<td>1</td>
</tr>
</tbody>
</table>
Part – B

24  a) 13
    b) False

25  Viruses require an active host program or an already-infected and active operating system in order for viruses to run, cause damage and infect other executable files or documents.

Worms are stand-alone malicious programs that can self-replicate.

OR

Web Browser: A web browser is a software application for accessing information on the World Wide Web. When a user requests a web page from a particular website, the web browser retrieves the necessary content from a web server and then displays the page on the user’s device.

Web Server: A web server is a computer that runs websites. The basic objective of the web server is to store, process and deliver web pages to the users. This intercommunication is done using Hypertext Transfer Protocol (HTTP).

Popular web browsers: Google Chrome, Mozilla Firefox, Internet Explorer etc.

26  a. SMTP - Simple Mail Transfer Protocol
    b. XML - eXtensible Markup Language
    c. LAN – Local Area Network
    d. IPR – Intellectual Property Rights

27  The list of identifiers used in a function call is called actual parameter(s) whereas the list of parameters used in the function definition is called formal parameter(s).

Actual parameter may be value / variable or expression.

Formal parameter is an identifier.

Example:

```
def area(side):              # line 1
    return side*side;

print(area(5))              # line 2
```

In line 1, side is the formal parameter and in line 2, while invoking area() function, the value 5 is the actual parameter.
A formal parameter, i.e. a parameter, is in the function definition. An actual parameter, i.e. an argument, is in a function call.

OR

Use of global key word:
In Python, global keyword allows the programmer to modify the variable outside the current scope. It is used to create a global variable and make changes to the variable in local context. A variable declared inside a function is by default local and a variable declared outside the function is global by default. The keyword global is written inside the function to use its global value. Outside the function, global keyword has no effect.

Example

```python
c = 10  # global variable

def add():
    global c
    c = c + 2  # global value of c is incremented by 2
    print("Inside add():", c)

add()
c=15
print("In main.":, c)
```

output:
Inside add() : 12
In main: 15

28  CORRECTED CODE:

```
Value=30
for VAL in range(0,Value):  # Error 1
    if val%4==0:  # Error 2
        print (VAL*4)
    elif val%5==0:  # Error 3
        print (VAL+3)
    else:  # Error 4
        print(VAL+10)
```

29  OUTPUT: (ii)

Maximum value of Lower: 3
Maximum value of Upper: 4

30  A table may have more than one such attribute/group of attributes that identifies a tuple uniquely, all such attribute(s) are known as Candidate Keys.
### Table: Item

<table>
<thead>
<tr>
<th>Ino</th>
<th>Item</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>I01</td>
<td>Pen</td>
<td>500</td>
</tr>
<tr>
<td>I02</td>
<td>Pencil</td>
<td>700</td>
</tr>
<tr>
<td>I04</td>
<td>CD</td>
<td>500</td>
</tr>
<tr>
<td>I09</td>
<td></td>
<td>700</td>
</tr>
<tr>
<td>I05</td>
<td>Eraser</td>
<td>300</td>
</tr>
<tr>
<td>I03</td>
<td>Duster</td>
<td>200</td>
</tr>
</tbody>
</table>

In the above table Item, ItemNo can be a candidate key.

31. `fetchall()` fetches all the rows of a query result. An empty list is returned if there is no record to fetch the cursor.
   
   `fetchone()` method returns one row or a single record at a time. It will return None if no more rows / records are available.
   
   Any example.

32. DDL – Data Definition Language
    
    DML – Data Manipulation Language
    
    Any two out of INSERT, DELETE, UPDATE

33. OUTPUT : `funnpython`

34. ```python
def LShift(Arr,n):
    L=len(Arr)
    for x in range(0,n):
        y=Arr[0]
        for i in range(0,L-1):
            Arr[i]=Arr[i+1]
        Arr[L-1]=y
    print(Arr)

Note : Using of any correct code giving the same result is also accepted.
```

35. ```python
def displayMeMy():
    num=0
    f=open("story.txt","rt")
    N=f.read()
    M=N.split()
    for x in M:
        if x=="Me" or x== "My":
            print(x)
            num=num+1
    f.close()
    print("Count of Me/My in file:",num)
```

3
OR

```python
def count_A_M():
    f = open("story.txt","r")
    A, M = 0, 0
    r = f.read()
    for x in r:
        if x[0] == "A" or x[0] == "a":
            A = A + 1
        elif x[0] == "M" or x[0] == "m":
            M = M + 1
    f.close()
    print("A or a: ", A)
    print("M or m: ", M)
```

*Note: Using of any correct code giving the same result is also accepted.*

36 OUTPUT:

i.

<table>
<thead>
<tr>
<th>Department</th>
<th>Count(*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>History</td>
<td>3</td>
</tr>
<tr>
<td>Computer Sc</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
</tbody>
</table>

ii. Max - 31/07/2018 or 2018-07-31 Min- 05/09/2007 or 2007-09-05

iii.

<table>
<thead>
<tr>
<th>name</th>
<th>Department</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jugal</td>
<td>Computer Sc</td>
<td>Delhi</td>
</tr>
<tr>
<td>Shiv Om</td>
<td>Computer Sc</td>
<td>Delhi</td>
</tr>
</tbody>
</table>

37 ANSWER: (Using of any correct code giving the same result is also accepted.)

```python
def PUSH(Arr, value):
    s = []
    for x in range(0, len(Arr)):
        if Arr[x] % 5 == 0:
            s.append(Arr[x])
    if len(s) == 0:
```


print("Empty Stack")
else:
    print(s)

OR

def popStack(st):
    # If stack is empty
    if len(st)==0:
        print("Underflow")
    else:
        L = len(st)
        val=st[L-1]
        print(val)
        st.pop(L-1)

38 a. Most suitable place to install the server is HR center, as this center has maximum number of computers.

b. 

![Diagram]

c. Switch

d. Repeater may be placed when the distance between 2 buildings is more than 70 meter.

e. WAN, as the given distance is more than the range of LAN and MAN.

39 i. SELECT * FROM teacher WHERE department= "History";

ii. SELECT name FROM teacher WHERE department= "Mathematics" AND gender= "F";

iii. SELECT name FROM teacher ORDER BY date_of_join;

iv. SELECT name, salary, age FROM teacher WHERE gender= 'M';

v. SELECT name, salary*0.1 AS Bonus FROM teacher;
import pickle

def createFile():
    fobj=open("Book.dat","ab")
    BookNo=int(input("Book Number : "))
    Book_name=input("Name :")
    Author = input("Author: ")
    Price = int(input("Price : "))
    rec=[BookNo,Book_name,Author,Price]
    pickle.dump(rec,fobj)
    fobj.close()

def CountRec(Author):
    fobj=open("Book.dat","rb")
    num = 0
    try:
        while True:
            rec=pickle.load(fobj)
            if Author==rec[2]:
                num = num + 1
        except:
            fobj.close()
    return num

OR

import pickle

def CountRec():
    fobj=open("STUDENT.DAT","rb")
    num = 0
    try:
        while True:
            rec=pickle.load(fobj)
            if rec[2] > 75:
                print(rec[0],rec[1],rec[2],sep="\t")
                num = num + 1
        except:
            fobj.close()
    return num