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CLASS XII PB-1 2022-23
COMPUTER SCIENCE (Theory) CODE : 083
MARKING SCHEME

Section –A

1. c) while
2. b) False
3. b) 4
4. a) True
5. c) alter
6. b) r+
7. b) drop
8. c) candidate key
9. a) -a-ssistance
10. c) Statement 3
11. c) file-object
12. c) A table with a Primary Key column cannot have an alternate key.
13. a) FTP
14. c) 4.0
15. d) sum()
16. c) cursor
17. a) Both A and R are true and R is the correct explanation for A
18. d) A is False R is True

Section –B

19. Errors:

n=int(input("Enter a positive integer: ")) **# bracket is missing**

f=1 # It should be 1 not 0

for i in range(**1,n+1**):**#It must starts with 1 otherwise give 0 result**

f*=i

print(f)#Indentation to print the factorial value

20. LAN vs MAN

	LAN	MAN
Full Form	Local Area Network	Metropolitan Area Network
Used in	Schools, Homes, Hospitals within 1 km area etc.	Telecom companies, Government Agencies
Speed	High	Moderate
Design	Very easy	Difficult then LAN
Coverage	Covers short distance like office, building or campus	Cover large area such as town, cities etc.

HTML vs XML

	HTML	XML
Full Form	Hyper Text Markup Language	eXtensible Markup Language
Commands	Predefined	As per need of user
Functions	Display web page data	Creates structural data
Language	Predefined language with its own implications	Standard language can define other computer languages

21. a) exam="Russia Ukraine"

```
print(exam[::2])
```

b) {age:26} Aman

22. A table can have multiple candidate key and primary keys as well. Because table can have more than one column with unique values. Multiple primary keys are known as composite primary keys.

23. a) i) VoIP – Voice over Internet Protocol
 ii) IMAP – Internet Mail Access Protocol
 b) Wireless or Unguided Media

24. 34@53@[13, 24] **OR**

[7]

25. $\frac{\text{count}(*)}{5}$ $\frac{\text{avg}(\text{score})}{45}$

OR

	Where	Having
Use	Apply filter to select clause	Apply filter to group by
Row/Column	Row functions	Column Functions
Commands	Select, delete, update	Only Group by
Group By	Before Group By	After Group By
Functions	Single Row	Multiple Row

26. a) Degree – 6, Cardinality – 5, EID is most suitable to be the primary key

b)

i) name	project
Ranjan	P01
Muneera	P01
Alex	P02
Akhtar	P04
Styansh	P04

iii) name	salary
Ranjan	150000
Akhtar	125000
Muneera	135000

ii) name	salary
Ranjan	150000
Akhtar	125000

iv) min(doj)	max(dob)
2015-01-21	1993-12-16

```
27. def count_words_e():
    f1=open("MyFile.txt")
    data=f1.read()
    w=data.split()
    c=-1
    for i in w:
        if i[-1]=='e':
            c+=1
    print(c)
count_words_e()
```

OR

```
def reverseFile():
    f1=open("MyFile.txt")
    data=f1.readlines()
    for i in range(len(data)):
        print(data[i][::-1])
```

28. a) i) project count(*)

```
-----
P01                2
P02                1
P04                2
```

```
ii)  pid          pname          eid          name
-----
    P01      Road 102 Carpeting    E01      Ranjan
    P02      Civil Lines Parking    E04      Alex
    P01      Road 102 Carpeting    E03      Muneera
    P04      Footover Bridge K-13    E02      Akhtar
    P04      Footover Bridge K-13    E05      Satyansh
```

```
iii) min(startdate)          max(startdate)
-----
    2022-01-28                2022-03-19
```

```
iv) avg(salary)
-----
    135000
```

```
29. def AdjustList(l):
    print(list(reversed(l)))
    l=[3,4,5,6,2,1]
```

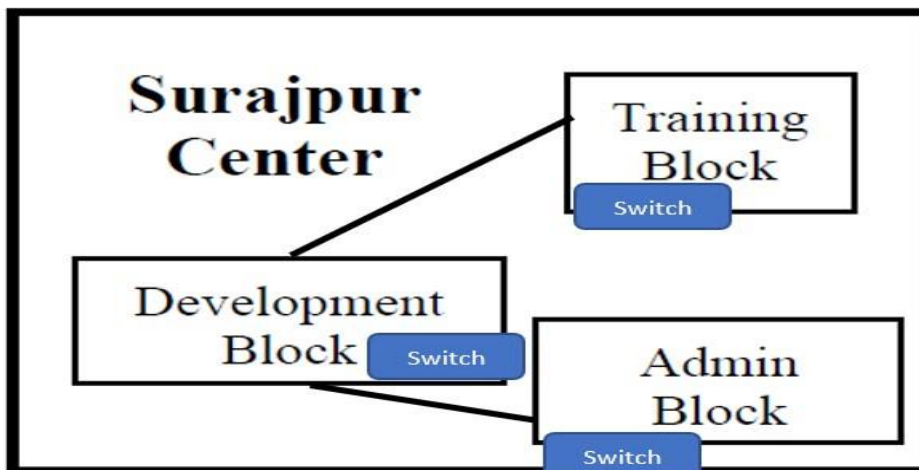
```
30. a)visitors=[[ '305', '10/11/2022', 'Geeta','F', 15],[ '306', '10/11/2022', 'Arham','M', 15],\
                [ '307', '11/11/2022', 'David','M', 18],[ '308', '11/11/2022', 'Madhuri','F', 17]]
status=[]
```

```
def Push_Element(visitors):
    global status
    m_c=0
    f_c=0
    for i in visitors:
        if i[4]>=15 and i[4]<=20:
            status.append(i[3])
            if i[3]=='M':
                m_c+=1
            if i[3]=='F':
                f_c+=1
    print("Males:",m_c)
    print("FeMales:",f_c)
def Pop_Element():
    global status
    if status!=[]:
        return status.pop()
    else:
        return "Done"
Push_Element(visitors)
for i in range(len(status)+1):
    print(Pop_Element())
```

OR

```
exp=input("Enter expression:")st=[]
def Push(st,expression):
    st.append(expression)def
Pop(st):
    if st!=[]:
        return st.pop()
    else:
        return "Stack is empty"for
i in exp:
    if i.isdigit() or i=='.':
        pass
    else:
        Push(st,i)
while True:
    if st!=[]:
        print(Pop(st))
    else:
        break
```

31. i) Development because it contains more number of computers
ii) Surajpur centre has multiple blocks and firewall ensures security. So it is required. It allows or block unwanted attacks.
iii)



- iv) a) Switch/Hub – In every block to interconnect the devices within every block
b) Router -In development block because server is going to be placed here
v) Satellite

32. a) 7@[3, 4]
8@[8]
b) i) `crsr=con1.cursor()`
ii) `query="update student set clas=clas+1"`
iii) `con1.commin()`

OR

- a) `@ss@ss`
b) i) `cur=con1.cursor()`
ii) `cur.execute(q)`
iii) `cur.fetchall()`

33. a) Advantage: Faster and no conversion required
Disadvantage: Can't read by users directly

b) `import csv`
`def ADD():`
 `f=open('events.csv','a',newline=")`
 `eventid=int(input("Enter eventid:"))`
 `description=input("Enter description")`
 `venue=input("Enter venue:")`
 `guests=int(input("Enter guests:"))`
 `cost=float(input("Enter cost:"))`
 `l=[eventid,description,venue,guests,cost]`
 `fw=csv.writer(f)`
 `fw.writerow(l)`

`def COUNTR():`
 `f=open('events.csv','r')`
 `fr=csv.reader(f)`
 `c=0`
 `sum_guest=0`
 `sum_cost=0`
 for i in fr:
 `c+=1`
 `sum_guest+=int(i[3])`
 `sum_cost=sum_cost+float(i[4])`
 `avg_cost=sum_cost/c`
 `avg_guest=sum_guest/c`
 `print("Average Cost:",avg_cost)`
 `print("Average Guest:",avg_guest)`

`#ADD()`
`COUNTR()`

OR

a)

	Binary File	Text File
Bytes	Each data occupies same no. of bytes	Each character occupies 1 byte in the memory
EndOfLine	No endline character	Newline ends a line
User	Not user friendly	User friendly
Function	Dump and load	<code>write()</code> and <code>read()</code>
Modes	<code>wb,ab,rb,wb+,rb+,ab+</code>	<code>w,a,r,w+,r+,a+</code>

b) Same as above

34. i) import getcwd()

ii) temp.py,"w"

iii) f2.write(line)

iv) os.remove("CarAgency.py")

35. i) He creates Projects table first because PID is primary key and project is foreign key referenced with PID for employee table.

ii) We need no. of rows and columns to compute degree and cardinality of any table which is not specified over here. Suppose we consider project table has 3 rows and employee table has five rows then cartesian products will be as follows:

no. of rows = $3 \times 5 = 15$

no. of columns = $4 + 6 = 10$

Hence, Degree of cartesian product is 10.

iii) create table employee

(EID char(4) primary key,

name varchar(20),

DOB date not null,

DOJ date not null,

Salary integer,

Project char(5) references projects(PID));

iv) alter table employee add column gender char(1);

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