

Pre- Board (Semester 2) 2002
Set – 2 (Marking Scheme)

Subject : COMPUTER SCIENCE (Code: 083)

Class : XII

Section - A

Q.1 7

9

7

4

2 (2 Marks for correct output)

Q.2

(i) GSM (Global system for mobile communication)- ½ Mark

CDMA (Code Division Multiple Access) - ½ Mark

(ii) Ravi is using PAN-Personal Area Network. It is a private network which is setup by an individual to transfer data among his personal devices of home. - 1 Mark

Q.3 Attributes / Field: Columns of the table (Relation) is called as attributes.

Tuple: Rows of the table (relation) is called as a tuple (record).

Look at the following two tables:

Attribute
↖

Persons Table

PersonID	LastName	FirstName	Age
1	Hansen	Ola	30
2	Svendson	Tove	23
3	Pettersen	Kari	20

→ tuple

(1 Mark for definition & 1 Mark for example)

Q.4 Result set refers to a logical set of records that are fetched from the database by executing a query. Database cursor is a special control structure that facilitates the row by row processing of records in the result.

(1 Mark for resultset and 1 Mark for cursor)

Q.5 (½ Mark for each part)

(i) 4

(ii) 35 12

(iii) 1 Toyota

- 2 Suzuki
- 1 Mercedes
- 1 Tata
- (iv) C Class

- 6 (i) Primary Key – 1 Foreign Key – Many (1 Mark)
 (ii) SELECT NAME,SAL,DESIGNATION WHERE DISCOUNT IS NULL; - 1 Mark
- Q.7

- (i) Product table Primary Key – P_ID - ½ Mark
 Client table Primary key – C_ID - ½ Mark
- (ii) NO as P_ID is a foreign key in Client table so first record of TP01 is to be deleted from the Client table- 1 Mark

OR

- (i) P_ID - 1 Mark
- (ii) degree – 4 - ½ Mark
 cardinality – 5 - ½ Mark

Section - B

Q.8

R={"OM":1000, "JAI":4500, "BOB":8900,"ALI":1500, "ANU":900, TOM":8200,"Ram":1300,"piyush":1000}
 ST=[]

def PUSH(R,S):

for k in R:

if R[k] < 2000 and R[k] >1000 :

S.append(k)

def POP(S):

if S!=[]:

return S.pop()

else:

return None

PUSH(R,ST)

print("Popped ")

while True:

if ST!=[]:

print(POP(ST),end=" ")

else:

break

OR

R=[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15]

ST=[]

```
def PUSH(R,ST):
    for k in range(len(R)):
        if R[k] % 2 !=0 :
            ST.append(R[k])
```

```
def POP(ST):
    if ST!=[]:
        return ST.pop()
    else:
        return None
```

```
PUSH(R,ST)
print("Popped ")
```

```
while True:
    if ST!=[]:
        print(POP(ST),end=" ")
    else:
        break
```

(1 mark for correct PUSH operation)

(1 mark for correct POP operation)

(1 mark for correct function calls and displaying the output)

Q.9

(i) WHERE clause is used to select particular rows that satisfy the condition where having clause is used in connection with the aggregate function GROUP BY clause.

FOR EXAMPLE- select * from student where marks >80;

Select * from student group by stream having marks>90;

(1 Mark for difference & 1 Mark for example)

(ii) distinct - 1 Mark

Q.10 create table Sports (S_Code Integer Primary Key, S_Name Varchar(25) Not Null,
Coach_id Integer Unique , Fees integer)

(1 ½ Mark for create table)

(½ Mark for each constraint)

Section – C

Q.11

(i) SELECT SENDERNAME FROM SENDER WHERE SENDERCITY = 'Mumbai'; - 1 Mark

(ii) SELECT A.RECID, B.SENDERNAME, B.SENDERADDRESS, A.RECNAME, A.RECADDRESS
FROM RECEIVER A, SENDER B
WHERE A.SENDERID = B.SENDERID; - 1 Mark

(iii) SELECT * FROM RECEIVER ORDER BY RECNAME; - 1 Mark

(iv) SELECT RECCITY, COUNT(*) FROM RECEIVER GROUP BY RECCITY; - 1 Mark

Q.12

(i) Data transfer rates that can be supported by a network is called its bandwidth. It is measured in bits per second (bps). Modern day networks provide bandwidth in Kbps, Mbps and Gbps
(1 Mark for definition and 1 Mark for units)

OR

(a) gateway – 1 Mark

(b) MODEM – 1 Mark

(ii) **Similarities:** In both Bus and Tree topologies transmission can be done in both the directions, and can be received by all other stations. In both cases, there is no need to remove packets from the medium. - 1 Mark

Differences: Bus topology is slower as compared to tree topology of network. Tree topology is expensive as compared to Bus Topology. - **1 Mark**

Q.13

(i) Head Office and Tech Office. LAN - ½ Mark

Head Office and Coimbatore Office. WAN - ½ Mark

(ii) Switch/Hub - 1 Mark

(iii) Optical Fiber - 1 Mark

(iv) STAR topology - 1 Mark