

**Pre- Board (Semester 2) 2002**

**Set – 1 (Marking Scheme)**

**Subject : COMPUTER SCIENCE (Code: 083)**

**Class : XII**

Section - A

- Q.1 1. push(1) 2. push(2) 3. pop(2) 4. pop(1) - 1 Mark  
5. push(3) 6. push(4) 7. pop(4) 8. pop(3) - 1 Mark

Q.2

(i) HTTP – Hyper Text Transfer Protocol - ½ Mark

GPRS - **General Packet Radio Service** - ½ Mark

(ii) A firewall is a **network security** device that monitors incoming and outgoing network traffic and permits or blocks data **packets** based on a set of security rules. Its purpose is to establish a barrier between your internal network and incoming traffic from external sources (such as the internet) in order to block malicious traffic like viruses and hackers. - 1 Mark

Q.3 A FOREIGN KEY is a field (or collection of fields) in one table, that refers to the PRIMARY KEY in another table. The table with the foreign key is called the child table, and the table with the primary key is called the referenced or parent table. – 1 Mark

Look at the following two tables:

Persons Table

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

Orders Table

OrderID	OrderNumber	PersonID
1	77895	3
2	44678	3
3	22456	2
4	24562	1

Notice that the "PersonID" column in the "Orders" table points to the "PersonID" column in the "Persons" table.

The "PersonID" column in the "Persons" table is the PRIMARY KEY in the "Persons" table.

The "PersonID" column in the "Orders" table is a FOREIGN KEY in the "Orders" table.

( 1 Mark for example)

Q.4 **cursor.fetchall()** fetches all the rows of a query result. It returns all the rows as a list of tuples. An empty list is returned if there is no record to fetch. - ½ Mark

**cursor.fetchone()** method returns a single record or None if no more rows are available. It returns a tuple. - ½ Mark

Rowcount – It return an integer. - ½ Mark

Yes it is compulsory to commit() to save the transaction. - ½ Mark

Q.5 ( ½ Mark for each part)

(i) 6000 3500

(ii) gold@fishhere.net  
pb@herowndomain.org

(iii) Smith  
Gold  
Brown

(iv) Paula

6 (i) Because that RollNo is not present in Table1 and it is violating the rule of foreign key constraint.  
( 1 Mark)

(ii) DELETE will delete a particular row while DROP will delete the table along with the structure of the table. - 1 Mark

Q.7

(i) Emp table Primary Key – EMPNO - ½ Mark  
Job table Primary key – DEPTNO - ½ Mark

(ii) NO as Deptno is a foreign key in EMP table so first record of PETER is to be deleted from the EMP table- 1 Mark

OR

(i) EMAIL - 1 Mark

(ii) degree – 6 - ½ Mark  
cardinality – 4 - ½ Mark

### Section - B

Q.8

R={"OM":1000, "JAI":4500, "BOB":8900,"ALI":1500, "ANU":900,  
"TOM":8200,"Ram":2300,"piyush":6000}

ST=[]

def PUSH(R,S):

for k in R:

if R[k] > 3000 :  
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) DDL – Data Definition language. Example – Create table – 1 Mark

DML – Data Manipulation language. Example – update - 1Mark

(ii) Alter table book add (PUBLISHER char(30)) - 1 Mark for correct command

Q.10 create table Job ( J\_Code Integer Primary Key, J\_Description Varchar(25) Not Null,  
J\_Chg\_Hr Integer, J\_Lastupdate Date unique)

( 1 ½ Mark for create table)

( ½ Mark for each constraint)

#### Section – C

Q.11

- (i) select category, count(category) from stationary group by category; - 1 Mark
- (ii) select CNAME, PHNO from consumer, stationary where CONSUMER.SID = STATIONARY.SID and company = "ABC"; - 1 Mark
- (iii) select CNAME, SNAME from consumer, stationary where CONSUMER.SID = STATIONARY.SID and PRICE > 50; - 1 Mark
  
- (vi) update stationary set price = price + 10 where company <>'ABC'; - 1 Mark

Q.12

(i) **Hub**

A hub is a type of device that's commonly used as a connection point for various devices in a Local Area Network (LAN). It works by receiving packets that arrive at one of its multiple ports, copying the packets, and sending them to its other ports so that all LAN segments can see the data.

**Switch**

A networking switch is a type of hardware that uses packet switching to receive and forward data to its intended destination within a network. Essentially, a switch is a more efficient, more intelligent version of a hub.

( 1 Mark for switch and 1 Mark for Hub)

OR

A **web server** is a computer that runs websites. It's a computer program that distributes web pages as they are requisitioned. – 1 Mark

A **Web page** is a document for the World Wide Web that is identified by a unique uniform resource locator (URL). - 1 Mark

(ii) A worm is a self-replicating computer program. It uses a network to send copies of itself to other computers on the network and it may do so without any user intervention. - 1 ½ Mark

**Most of the common anti-virus(anti-worm) remove the worm. - ½ Mark**

Q.13

- (i) MAN - 1 Mark (ii) STAR topology - 1 Mark
- (iii) Rudra Building as it is having maximum number of computer - 1 Mark
- (iv) i) Rudra building as it contain server - ½ Mark  
ii) in each block as they help to share data packets within the devices of the network in each block - ½ Mark