

Objectives (5 marks)

1. Which of the following database object does not physically exist?

- A) Base table
- B) Index
- C) View**
- D) none of the above

2. The query used to remove all references for the pubs and newspubs databases from the system tables is.....

- A) DROP DATABASE pubs, newpubs;**
- B) DELETE DATABASE pubs, newpubs;
- C) REMOVE DATABASE pubs, newpubs;
- D) DROP DATABASE pubs and newpubs;

3. '___' matches any string of _____ three characters. '___%' matches any string of at _____ three characters.

- A) Atleast, Exactly
- B) Exactly, Atleast**
- C) Atleast, All
- D) All , Exactly

**4. Select name, course_id
from instructor, teaches
where instructor_ID= teaches_ID;**

This Query can be replaced by which one of the following ?

- A) Select name,course_id from teaches,instructor where instructor_id=course_id;
- B) Select name, course_id from instructor natural join teaches;**
- C) Select name ,course_id from instructor;
- D) Select course_id from instructor join teaches;

5. Which of the following statements contains an error?

- A) Select * from emp where empid = 10003;
- B) Select empid from emp where empid = 10006;
- C) Select empid from emp;
- D) Select empid where empid = 1009 and lastname = 'GELLER';**

DML, DDL (5 marks)

1. Create following table and insert some data:

Column Name	Criteria	Description	Default
EmpID (primary key)	Maximum of 30 characters	Employee ID	None
EmpName	Maximum of 40 characters	Employee Name	None
Basic	6 digits before decimal and 2 after	Basic Pay	0
Hra	5 digits before decimal and 2 after	House Rent	0
Doj	Date	Date of Joining	Today's Date
MngrID	Maximum of 30 characters	Values of existing EmpID	None

```
create table Adnan_Employee
(
EmpId varchar(30) primary key,
EmpName varchar(40),
BasicPay decimal(8,2) default '0',
HRA decimal(7,2) default '0',
DoJ date default getdate(),
MngrId varchar(30) constraint fk_emp_mgr references Adnan_Employee(EmpId)
);
```

2. Add date of birth column. Default date should be 1.1.1942.

```
alter table Adnan_Employee
add DoB date default '1.1.1942';
```

3. Insert some data. Make sure that HRA is 5% of Basic.

```
alter table Adnan_Employee
add constraint cnstrnt_hra check(HRA=0.05*BasicPay);
```

```
insert into Adnan_Employee
values ('E101', 'Adnan', 10000.00, 500.00, '12.8.2013', 'E101', '10.4.1992')
```

```
insert into Adnan_Employee
values ('E102', 'Deepika', 5000.00, 250.00, '1.18.2014', 'E101', '10.24.1991')
```

```
insert into Adnan_Employee
values ('E103', 'Swati', 20000.00, 1000.00, '3.25.2014', 'E101', '8.5.1989')
```

```
insert into Adnan_Employee
values ('E104', 'Bhagu', 15000.00, 750.00, '6.28.2014', 'E102', '1.4.1991')
```

```
insert into Adnan_Employee
values ('E105', 'Hemant', 20000.00, 1000.00, '1.8.2015', 'E103', '6.5.1992')
```

4. Write query to List employee Id, age of all the employees who are not managers.

```
select EmpId, DATEDIFF("yyyy", DoB, GetDate()) as "Age" from Adnan_Employee
where EmpId not in (select distinct MngrId from Adnan_Employee)
```

5. Create a view called Emp_Details containing employee and his manager details

```
create view Adnan_Emp_Details as select e.EMPID, e.EmpName, e.MngrId,
m.EmpName as MngrName
from Adnan_Employee as e
Left join Adnan_Employee as m
on e.MngrId = m.EMPID;

select * from Adnan_Emp_Details
```

Queries (20 marks)

```
/* 1st table in the project*/
create table salespeople
(snum numeric(5) primary key,
sname char(20),
city varchar(20),
rating numeric(3),
comm numeric(11,2));

/* 2nd table in the project*/
create table customer
(cnum numeric(5) primary key,
cname varchar(18),
city char(20),
snum numeric(5) references salespeople(snum));

/* 3rd table orders */
create table orders
(onum numeric(5) primary key,
odate date,
oamount numeric(14,2),
cnum numeric(5) references customer(cnum),
snum numeric(5) references salespeople(snum));

insert into salespeople values(1001, 'Dr. James Bond', 'London', 000, null);
insert into salespeople values(1001, 'James', 'London', 200, null)
insert into salespeople values(1002, 'Grass', 'London', 200, null)
insert into salespeople values(1004, 'Lucy Mathur', 'Mumbai', 200, null)
insert into salespeople values(1005, 'Nawab Hussain', 'Newyork', 200, null)
insert into salespeople values(1011, 'Raminder Sing', 'Paris', 200, null)
```

```
select * from salespeople;
```

```
insert into customer values (2001, 'Zalim Singh', 'London',1002);
```

```
insert into customer values (2004, 'Ching Chong Chung', 'Newyork',1005);
```

```
insert into customer values (2008, 'Zalim Singh', 'Mumbai',1002);
```

```
insert into customer values (2007, 'Zalim Singh', 'Cairo',1011);
```

```
select * from customer
```

```
insert into orders values (3001, GETDATE(), 3422.22, 2001, 1002);
```

```
insert into orders values (3005, '01-jul-2015', 3422.22, 2001, 1002);
```

```
insert into orders values (3005, '01-jul-2015', 3422.22, 2001, 1002);
```

```
insert into orders values (3007, '01-jan-2015', 9877.00, 2004, 1005);
```

```
insert into orders values (3010, '11-dec-2014', 89000, 2007, 1011);
```

```
select * from orders
```

```
=====
```

WAQ means write a query.

Solve the following queries based on the above tables.

Part 1

- 1) WAQ to print all sales persons who live at London, New York

```
select snum,sname,city from Adnan_salespeople where city IN  
( 'London', 'Newyork' )
```

- 2) WAQ to print cnum, cname, and city they live in. cname should be printed in upper case, city in lower case

```
select cnum as "Customer Number", UPPER(cname) as "Customer Name",  
LOWER(city) as "City" from Adnan_customer
```

- 3) WAQ to print number of orders for each customer(use group by)

```
select cnum as "Customer Number", count(onum) as "Number of  
orders" from Adnan_orders group by cnum
```

- 4) WAQ where you will print number of orders for every salesman, his highest order amount, lowest order amount and average order amount. Customer number should be printed in descending order

```
select snum,cnum,MAX(oamount) "Highest Order Amt", MIN(oamount)  
"Lowest Order Amt", AVG(oamount) "Average Order Amt"  
from Adnan_orders group by snum,cnum order by cnum desc
```

Part 2

Q1 WAQ to print all customers for more than one order

```
select cnum, count(onum) "Number of orders" from Adnan_orders group
by cnum having count(onum)>1
```

Q2 Print salesman who have no customers

```
select snum,sname from Adnan_salespeople where snum not in (select distinct
snum from Adnan_orders)
```

Q3 WAQ to print all those customers who have not given any orders

```
select cnum,cname from Adnan_customer
where cnum not in (select distinct cnum from Adnan_orders)
```

Q4 print order number and 2 lowest order amount

```
select distinct top 2 onum, oamount from Adnan_orders
order by oamount asc
```

Q5 print all the customer city of 6 characters (use like operator only)

```
select city from Adnan_customer
where LTrim(RTrim(city)) like '_____'
```

Q6 print all those cities where customer stay ending with “n”

```
select * from Adnan_customer
where LTrim(RTrim(city)) like '%n'
```