

205119097

DATABASE MANAGEMENT
SYSTEM

QUESTION 01

- A. create table emp (
 empno number(6),
 empname varchar(20) not null,
 job varchar(10) not null,
 mgr number(8),
 deptno number(6),
 sal number(7,2));
- B. alter table emp
 add column number(5);
- C. alter table emp
 modify job varchar(12);
- D. alter table emp
 modify job varchar(12);
- E. create table dept (
 deptno number(5) primary key,
 dname varchar(20),
 dloc varchar(20));
- F. alter table emp
 modify empno int primary key;
- G. alter table emp
 add check(empno>100);
- H. alter table emp
 modify sal float default 5000 not null;
- I. alter table emp
 add dob date;

QUESTION 02

- 2.1 insert into dept values(10,'management','main block');
insert into dept values(20,'development','manufacturing unit');
insert into dept values(30,'maintainance','main block');
insert into dept values(40,'transport','admin block');
insert into dept values(50,'sales','head office');
- 2.2 insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7369,'smith','clerk',7566,'17-dec80',800,0,20);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7399,'asant','salesman',7566,'20-feb81',1600,300,20);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7499,'allen','salesman',7698,'20-feb81',1600,300,30);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7521,'ward','salesman',7698,'22-feb82',1250,500,30);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7566,'jones','manager',7839,'02-apr81',5975,500,20);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7698,'blake','manager',7839,'01-may79',9850,1400,30);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7611,'scott','hod',7839,'12-jun76',3000,null,10);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7839,'clark','ceo',null,'16-mar72',9900,null,10);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7368,'ford','supervis',7366,'17-dec80',800,0,20);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7599,'alley','salesman',7698,'20-feb81',1600,300,30);
insert into emp(empno, empname ,job, mgr ,dob ,sal ,commi, deptno)
values(7421,'drank','clerck',7698,'22-jan82',1250,500,30);
- 2.3 update emp set commi=1000 where job='manager';
- 2.4 create table employee (
empno integer primary key,
ename varchar(20) not null,
job varchar(30) not null,
mgr integer,
deptno integer,
sal integer,
comm integer,
dob varchar(10));

- 2.5 delete from employee where job='supervis';
- 2.6 delete from employee where empno=7599;
- 2.7 select * from emp order by sal;
- 2.8 select * from emp order by sal desc;
- 2.9 select * from emp where deptno=30;
- 2.10 select distinct deptno from emp;
- 2.11 select * from emp order by empname;
- 2.12 create table manager as select * from emp where job='manager';
- 2.13 select * from emp where commi is null;

QUESTION 03

- A. select * from emp where deptno in (20,10);
- B. select * from employee where ename like 's%';
- C. select * from employee where ename not like 's%';
- D. select * from employee where empno between 7500 and 7600 ;
- E. select * from employee where empno not between 7500 and 7600 ;
- F. select sqrt(sal) from emp;
- G. select count(*) from emp;
- H. select sum(sal),avg(sal) from emp;
- I. select min(sal) as min_sal, max(sal) as max_sal from emp;
- J. select sum(sal) from emp;
- K. select job,sum(sal) from emp group by job;
- L. select to_char(to_date('14-jul-09'),'month') from dual;
- M. select to_date(dob,'dd-mm-yy') from emp;
- N. select add_months(dob,2) from emp;
- O. select last_day('05-oct-09') from dual;
- P. select round(to_date(dob),'month') from emp;
 - a. select round(to_date(dob),'year') from emp;
 - b. select round(to_date(dob),'day') from emp;
- Q. select(sysdate-60) from dual;
- R. select empname ,sal , sal+0.15* sal from emp;
- S. select empname from emp where empname like 'b%' or empname like 'c%';
- T. select empname,sal,mgr from emp where sal in (select min(sal) from emp group by mgr);
- U. select dname, count (empname) from emp, dept where emp.deptno=dept.deptno group by dname;
- V. select empname from emp where length(empname)<=5;

- W. select empname from emp where mgr in (7399,7698,7566);
- X. select count(distinct job)from emp;
- Y. select max(sal)-min(sal) from emp;
- Z. select count(distinct deptno) from emp;
- AA. select empname,dob from emp where to_char(dob,'mon')='feb';
- BB. select empname from emp where to_char(dob,'mon') like to_char(sysdate, 'mon');
- CC. select empname from emp where empname like 's%h';
- DD. select empname from emp where sal>5000;

QUESTION 04

- 4.1 select * from emp,dept where emp.deptno=dept.deptno
and
(dept.dname='maintainance' or dept.dname='development');
- 4.2 select empname,sal from emp
where sal>(select min(sal) from emp)
and job like 'm%';
- 4.3 select * from emp
where job=(select job from emp
where empname='jones');
- 4.4 select * from emp
where sal>(select max(sal) from emp where deptno=30);
- 4.5 select * from emp
where job=(select job from emp where empname='jones')
and sal>=(select sal from emp where empname='ford');
- 4.6 select empname,job from emp
where deptno=20 and
job=any(select job from emp e,dept d
where e.deptno=d.deptno and d.dname='management');
- 4.7 select * from emp outer
where sal>(select avg(sal) from emp
where deptno=outer.deptno);
- 4.8 select empname,job,dname from emp e,dept d
where e.deptno=d.deptno;
- 4.9 select * from emp
where job=any(select e.job from dept d,emp e
where d.deptno=e.deptno and dloc='main block')
and deptno!=(select deptno from dept where dloc='main block');
- 4.10 select * from emp
where deptno=10
and job=any(select job from emp,dept
where dept.deptno=emp.deptno
and dept.dname='development');
- 4.11 select * from emp

where job=(select job from emp where empname='ford')
and sal=(select sal from emp where empname='ford');

- 4.12 select dname from dept
 where deptno=any(select deptno from (select count(job) as no,deptno
 from emp where job='salesman' group by deptno) where no>=2);

- 4.13 select * from emp
 where deptno=20
 and job=any(select job from emp where deptno=30);

- 4.14 select * from emp
 where sal>any(select max(sal) from emp
 where deptno=20 or deptno=30 group by deptno);

- 4.15 select max(sal) from emp
 group by deptno having max(sal)>9000;

- 4.16 select max(sal) from emp group by empname
 having min(sal)>1000;

- 4.17 select a.dname from dept d,accdept a
 where d.deptno=a.deptno;

- 4.18 select empname from emp
 where deptno!=any(select deptno from accdept);

- 4.19 select * from emp left join dept on dept.deptno=emp.deptno;

- 4.20 select * from emp right join dept on dept.deptno=emp.deptno;

- 4.21 select * from emp full join dept on dept.deptno=emp.deptno;

- 4.22 select e.empname,m.empname from emp e,emp m where e.mgr=m.empno;

- 4.23 select e.empname,m.sal from emp e,emp m where e.mgr=m.empno;

- 4.24 select e.empname,e.job,e.empno,d.dname,d.dloc from emp e, dept d
 where e.deptno=d.deptno and d.deptno=e.deptno;

- 4.25 select e.empno,e.empname,e.job,m.empname from emp e,emp m
 where e.mgr=m.empno;

- 4.26 select e.empname,p.empname from emp e,emp p
 where e.sal=p.sal and e.empname!=p.empname;

QUESTION 05

- A. select deptno from dept union select deptno from accdept;
- B. select deptno from dept union all select deptno from accdept;
- C. select deptno from dept intersect select deptno from accdept;
- D. select deptno from dept minus select deptno from accdept;
- E. create view managers as select * from emp where job='manager';
- F. create view emp_all as select e.empno,e.empname,d.deptno,d.dname from emp e, dept d
where e.deptno=d.deptno and e.job not in('hod','ceo');
- G. drop view emp_all;

QUESTION 06

--6.1

```
declare
a number(10);
b number(10);
begin
a:=&a;
b:=&b;
dbms_output.put_line('the prev values of a and b were');
dbms_output.put_line(a);
dbms_output.put_line(b);
a:=a+b;
b:=a-b;
a:=a-b;
dbms_output.put_line('the values of a and b are');
dbms_output.put_line(a);
dbms_output.put_line(b);
end;
/
```

--6.2

```
declare
a number(10);
b number(10);
c number(10);
begin
a:=&a;
b:=&b;
dbms_output.put_line('the prev values of a and b were');
dbms_output.put_line(a);
dbms_output.put_line(b);
c:=a;
a:=b;
b:=c;
dbms_output.put_line('the values of a and b are');
dbms_output.put_line(a);
dbms_output.put_line(b);
end;
/
```

--6.3

```
declare
a number;
b number;
begin
a:=&a;
b:=&b;
if a=b then
dbms_output.put_line('both are equal');
elsif a>b then
dbms_output.put_line('a is greater');
else
dbms_output.put_line('b is greater');
end if;
end;
/
```

--6.4

```
declare
java number(10);
dbms number(10);
co number(10);
se number(10); es
number(10); ppl
number(10); total
number(10); avgs
number(10); per
number(10);
dbms_output.put_line('enter the marks');
begin
java:=&java;
dbms:=&dbms;
co:=&co;
se:=&se;
es:=&es;
ppl:=&ppl;
total:=(java+dbms+co+se+es+ppl);
per:=(total/600)*100;
if java<40 or dbms<40 or co<40 or se<40 or es<40 or ppl<40 then
dbms_output.put_line('fail');
elsif per>75 then
dbms_output.put_line('grade a');
elsif per>65 and per<75 then
dbms_output.put_line('grade b');
elsif per>55 and per<65 then
dbms_output.put_line('grade c');
else
dbms_output.put_line('invalid input');
```

```
end if;
dbms_output.put_line('percentage is ' || per);
dbms_output.put_line('total is ' || total);
end;
/
```

```
--6.5
declare
a number;
d number:=0;
sum1 number:=0;
begin
a:=&a;
while a>0
loop
d:=mod(a,10);
sum1:=sum1+d;
a:=trunc(a/10);
end loop;
dbms_output.put_line('sum = ' || sum1);
end;
/
```

```
--6.6
declare
a number;
rev number;
d number;
begin
a:=&a;
rev:=0;
while a>0
loop
d:=mod(a,10);
rev:=(rev*10)+d;
a:=trunc(a/10);
end loop;
dbms_output.put_line('reverse number = ' || rev);
end;
/
```

```

--6.7
declare
a number;
c number:=0;
i number;
begin
a:=&a;
for i in 1..a
loop
if mod(a,i)=0 then
c:=c+1;
end if;
end loop;
if c=2 then
dbms_output.put_line(a || ' is a prime number');
else
dbms_output.put_line(a || ' is not a prime number');
end if;
end;
/

```

```

--6.8
declare
n number;
f number:=1;
begin
n:=&n;
for i in 1..n
loop
f:=f*i;
end loop;
dbms_output.put_line('factorial ' || n || ' is ' || f);
end;
/

```

```

--6.9
create table areas(radius number(10),area number(6,2));

```

```

declare
pi constant number(4,2):=3.14;
radius number(5):=3;
area number(6,2);
begin
while radius<7 loop
area:=pi*power(radius,2);
insert into areas values(radius,area);
radius:=radius+1;
end loop;

```

```
end;  
/
```

--6.10

```
create table acct(name varchar2(10),cur_bal number(10),acctno number(6,2));  
insert into stud values('&sname',&rollno,&marks);  
select * from acct;
```

```
declare  
mano number(5);  
mcb number(6,2);  
minibal constant number(7,2):=1000.00;  
fine number(6,2):=100.00;  
begin  
mano:=&mano;  
select cur_bal into mcb from acct where acctno=mano;  
if mcb<minibal then  
update acct set cur_bal=cur_bal-fine where acctno=mano;  
end if;  
end;  
/
```

QUESTION 07

a)

```
select * from employee;
create procedure employee
(empid in employee.empid%type) is
begin
update employee set empsal = empsal+1000
select from employee
where deptid >20;
select *from employee;
```

b)

```
select *from employee;
create procedure employee
(empid in employee.empid%type) is
begin
update employee set empsal = empsal+(empsal*10)/100
select from employee
where deptid >20;
```

c)

```
create procedure employee
(empid in employee.empid%type) is
begin
```

```
select emp_sal from employee
```

```
where deptid =20;
```

```
emp_sal
```

```
5000
```

d)

```
create procedure employee
```

```
(empid in employee.empid%type) is
```

```
begin
```

```
select deptname from employee
```

```
where deptid =20;
```

```
deptname
```

```
chemistry
```

e)

```
create [or replace] procedure employee
```

```
(empid in employee.empid%type) is
```

```
begin
```

```
select deptname from employee
```

```
where deptid =30;
```

```
deptname
```

```
maths
```


QUESTION 08

A.

```
create trigger trig1 before insert on dept for each row declare a number;

begin
    if (:new.deptno is null) then
        raise_application_error(-20001,'error:: deptno cannot be null');
    else
        select count(*) into a from dept where deptno =:new.deptno;
        if(a=1) then
            raise_application_error(-20002,'error:: cannot have duplicate deptno ');
        end if;
    end if;
end;
```

B.

```
create trigger trig2 after delete on dept for each row

begin
    delete from emp where emp.deptno=:new.deptno;

end;
```

C.

```
create trigger trig3 after delete on emp for each row
begin
    insert into log(val1, val2, ...) values (old.val1, old.val2, ...);

end;
```