**QUERY 01 : Write SQL code to establish the schema (including enforcement of integrity constraints).Populate DEPT with indicated tuples. [Note: While creating DEPT do not enforce the referential integrity constraint].You should use default value for HOD while inserting tuples in DEPT. Also populate first 6 tuples in STAFF.**

SQL> drop table DEPT cascade constraints;

Table dropped.

SQL> drop table STAFF cascade constraints;

Table dropped.

SQL> drop table STUDENT cascade constraints;

Table dropped.

SQL> create table DEPT(

2 DNAME VARCHAR (25) NOT NULL,

3 BRANCH CHAR (2) NOT NULL,

4 INTAKE NUMBER (2) NOT NULL,

5 YR\_EST NUMBER (4) NOT NULL,

6 HOD NUMBER (3) DEFAULT 101 NOT NULL,

7 constraint DEPT\_PK\_BRANCH PRIMARY KEY (BRANCH),

8 constraint DEPT\_CHK\_BRANCH check (BRANCH IN ('CS','IT','EN')),

9 constraint DEPT\_CHK\_INTAKE check (INTAKE IN (20,30,40)),

10 CONSTRAINT DEPT\_CHK\_YR\_EST CHECK (YR\_EST > 2005)

11 );

Table created.

SQL> CREATE TABLE STAFF(

2 SID NUMBER(3) NOT NULL,

3 NAME VARCHAR(25) NOT NULL,

4 BRANCH CHAR(2) NOT NULL,

5 DESG VARCHAR(9) NOT NULL,

6 JOIN\_DT DATE NOT NULL,

7 CONSTRAINT STAFF\_PK\_SID PRIMARY KEY (SID),

8 CONSTRAINT STAFF\_CHK\_SID CHECK(SID > 100),

9 CONSTRAINT STAFF\_FK\_BRANCH FOREIGN KEY (BRANCH) references DEPT(BRANCH) ,

10 CONSTRAINT STAFF\_CHK\_DESG CHECK(DESG IN ('Professor','Associate','Assistant'))

11 );

Table created.

SQL> CREATE TABLE STUDENT (

2 ROLL NUMBER(5) NOT NULL,

3 LNAME VARCHAR(15) NOT NULL,

4 FNAME VARCHAR(15) NOT NULL,

5 EMAIL VARCHAR(25) NOT NULL,

6 ENROLL CHAR(9) NOT NULL,

7 ADVISOR NUMBER(3) NOT NULL,

8 CONSTRAINT STUDENT\_PK\_ROLL PRIMARY KEY (ROLL),

9 CONSTRAINT STUDENT\_CHK\_ROLL CHECK(ROLL > 3000),

10 CONSTRAINT STUDENT\_UQ\_EMAIL UNIQUE (EMAIL),

11 CONSTRAINT STUDENT\_UQ\_ENROLL UNIQUE(ENROLL),

12 CONSTRAINT STUDENT\_FK\_ADVISOR FOREIGN KEY (ADVISOR) REFERENCES STAFF(SID)

13 );

Table created.

SQL**>** prompt 'populating dept table'

SQL> select count(\*) from DEPT;

COUNT(\*)

----------

3

1 row selected.

SQL> prompt 'populating staff table'

SQL> select count(\*) from STAFF;

COUNT(\*)

----------

10

1 row selected.

SQL> prompt 'populating student table'

SQL> select count(\*) from STUDENT;

COUNT(\*)

----------

48

1 row selected.

--------------------------------------------------------------------------------------

**QUERY 02 : Create a sequence STAFF\_SQ with appropriate starting value and maximum range such that you can use it to populate STAFF table with remaining tuples. [Use STAFF\_SQ.NEXTVAL, STAFF\_SQ.CURRVAL to access sequence values].Verify if the sequence has been created [use USER\_CONSTRAINTS table] along with other sequences on current schema tables.On populating STAFF, remove the sequence.'**

SQL> select \* from staff;

SID NAME BR DESG JOIN\_DT

--------- ------------------------- -- --------- ----------

101 Kamalkant Marathe CS Professor 12-JUN-05

102 dishesh Vidyarthi CS Associate 22-JUL-06

103 Aasawari Deodhar CS Assistant 13-OCT-07

104 Deo Narayan Mishra IT Assistant 13-OCT-07

105 Jasmine Paul IT Associate 12-MAY-08

106 Manishi Singh IT Professor 11-NOV-09

107 Ramanathan Arun EN Professor 12-AUG-05

108 Saifuddin Sheikh EN Associate 19-SEP-10

109 Babush Baltiwala EN Assistant 12-APR-12

110 Christopher Kundu CS Assistant 13-MAR-13

10 rows selected.

SQL> create sequence staff\_sq

2 increment by 1

3 start with 107

4 maxvalue 110;

Sequence created.

SQL>desc user\_sequences;

Name Null? Type

----------------------------------------- -------- ------------

SEQUENCE\_NAME NOT NULL VARCHAR2(30)

MIN\_VALUE NUMBER

MAX\_VALUE NUMBER

INCREMENT\_BY NOT NULL NUMBER

CYCLE\_FLAG VARCHAR2(1)

ORDER\_FLAG VARCHAR2(1)

CACHE\_SIZE NOT NULL NUMBER

LAST\_NUMBER NOT NULL NUMBER

SQL> select sequence\_name,min\_value,max\_value,increment\_by from user\_sequences;

SEQUENCE\_NAME MIN\_VALUE MAX\_VALUE INCREMENT\_BY

------------------------------ ---------- ---------- ------------

LOGMNR\_EVOLVE\_SEQ$ 1 1.0000E+28 1

LOGMNR\_SEQ$ 1 1.0000E+28 1

LOGMNR\_UIDS$ 1 1.0000E+28 1

MVIEW$\_ADVSEQ\_GENERIC 1 4294967295 1

MVIEW$\_ADVSEQ\_ID 1 4294967295 1

REPCAT$\_EXCEPTIONS\_S 1 1.0000E+28 1

REPCAT$\_FLAVORS\_S -2.147E+09 2147483647 1

REPCAT$\_FLAVOR\_NAME\_S 1 1.0000E+28 1

REPCAT$\_REFRESH\_TEMPLATES\_S 1 1.0000E+28 1

REPCAT$\_REPPROP\_KEY 1 1.0000E+28 1

REPCAT$\_RUNTIME\_PARMS\_S 1 1.0000E+28 1

SEQUENCE\_NAME MIN\_VALUE MAX\_VALUE INCREMENT\_BY

------------------------------ ---------- ---------- ------------

REPCAT$\_TEMPLATE\_OBJECTS\_S 1 1.0000E+28 1

REPCAT$\_TEMPLATE\_PARMS\_S 1 1.0000E+28 1

REPCAT$\_TEMPLATE\_REFGROUPS\_S 1 1.0000E+28 1

REPCAT$\_TEMPLATE\_SITES\_S 1 1.0000E+28 1

REPCAT$\_TEMP\_OUTPUT\_S 1 1.0000E+28 1

REPCAT$\_USER\_AUTHORIZATIONS\_S 1 1.0000E+28 1

REPCAT$\_USER\_PARM\_VALUES\_S 1 1.0000E+28 1

REPCAT\_LOG\_SEQUENCE 1 1.0000E+28 1

STAFF12\_SQ 1 108 1

STAFF23\_SQ 1 108 1

STAFF\_SQ 1 110 1

SEQUENCE\_NAME MIN\_VALUE MAX\_VALUE INCREMENT\_BY

------------------------------ ---------- ---------- ------------

TEMPLATE$\_TARGETS\_S 1 1.0000E+28 1

23 rows selected.

SQL> select sequence\_name,min\_value,max\_value,increment\_by from user\_sequences where sequence\_name like 'STAFF%';

SEQUENCE\_NAME MIN\_VALUE MAX\_VALUE INCREMENT\_BY

------------------------------ ---------- ---------- ------------

STAFF12\_SQ 1 108 1

STAFF23\_SQ 1 108 1

STAFF\_SQ 1 110 1

SQL> select staff\_sq.nextval from dual;

NEXTVAL

----------

107

1 row selected.

SQL> insert into staff values(staff\_sq.currval,'RamanathanArun','EN','PROFESSOR','12-Aug-2005');

SQL> insert into staff values( staff\_sq.nextval,'Saifuddin Sheikh', 'EN', 'ASSOCIATE', '19-Sep-2010');

SQL> insert into staff values(staff\_sq.nextval,'Babush Baltiwala', 'EN', 'ASSISTANT', '12-Apr-2012');

SQL> insert into staff values(staff\_sq.nextval, 'Christopher Kundu', 'CS', 'ASSISTANT', '13-Mar-2013');

SQL> select \* from staff;

SID NAME BR DESG JOIN\_DT

---------- ------------------------- -- --------- ---------

101 Kamalkant Marathe CS Professor 12-JUN-05

102 dishesh Vidyarthi CS Associate 22-JUL-06

103 Aasawari Deodhar CS Assistant 13-OCT-07

104 Deo Narayan Mishra IT Assistant 13-OCT-07

105 Jasmine Paul IT Associate 12-MAY-08

106 Manishi Singh IT Professor 11-NOV-09

107 Ramanathan Arun EN Professor 12-AUG-05

108 Saifuddin Sheikh EN Associate 19-SEP-10

109 Babush Baltiwala EN Assistant 12-APR-12

110 Christopher Kundu CS Assistant 13-MAR-13

10 rows selected.

SQL> drop sequence staff\_sq;

Sequence dropped.

--------------------------------------------------------------------------------------

**QUERY 03 : Write SQL codes to populate STUDENT table with indicated tuples.Now, enforce referential integrity constraint on DEPT [use ALTER TABLE ... ADD …].You will notice that HOD attribute for all departments is a default value of 101.**

**Rectify DEPT for the correct values of HOD attribute as indicated in sample data [use UPDATE … SET … WHERE …].**

SQL> alter table DEPT add constraint DEPT\_FK\_HOD FOREIGN KEY (HOD) references STAFF(SID);

Table altered.

SQL> update DEPT set HOD=106 WHERE BRANCH='IT';

1 row updated.

SQL> update DEPT set HOD=107 WHERE BRANCH='EN';

1 row updated.

--------------------------------------------------------------------------------------

**QUERY-04 : Write a SQL code that will create a temporary table (view) named STUDENT\_VW on STUDENT table projecting the attributes ROLL, LNAME, FNAME, SID. List the contents of STUDENT\_VW. Also list all the views for the current schema tables [use USER\_VIEWS table]**

SQL> create view student\_vw as select roll,lname,fname,advisor as sid from student;

View created.

SQL> select view\_name from user\_views;

VIEW\_NAME

------------------------------

AQ$DEF$\_AQCALL

AQ$DEF$\_AQERROR

AQ$\_DEF$\_AQCALL\_F

AQ$\_DEF$\_AQERROR\_F

MVIEW\_EVALUATIONS

MVIEW\_EXCEPTIONS

MVIEW\_FILTER

MVIEW\_FILTERINSTANCE

MVIEW\_LOG

MVIEW\_RECOMMENDATIONS

MVIEW\_WORKLOAD

VIEW\_NAME

------------------------------

PRODUCT\_PRIVS

STUDENT\_VW

13 rows selected.

--------------------------------------------------------------------------------------

**QUERY-05 : Write a SQL code to insert students SheelaGoenka and VallabhShastri with roll numbers 3025 and 5013 respectively,into STUDENT\_VW and observe the effect on STUDENT table. Now create a view STU\_AFFL\_VW that will include attributes ROLL, LNAME, FNAME, BRANCH.Insert into STU\_AFFL\_VW, a tuple – 4013, Dawson, Ellis, IT. Observe the output and analyze the problems encountered**

SQL> drop view student\_vw;

View dropped.

SQL> create view student\_vw as select roll,lname,fname,advisor as sid from student;

View created.

SQL> insert into student\_vwvalues(3025,'sheela','goenka',108);

1 row created.

SQL> insert into student\_vwvalues(5031,'Vallabh','Shastri',109);

1 row created.

SQL>descstudent\_vw;

Name Null? Type

----------------------------------------- -------- -----------

ROLL NOT NULL NUMBER(5)

LNAME NOT NULL VARCHAR2(15)

FNAME NOT NULL VARCHAR2(15)

SID NUMBER(3)

SQL> select \* from student\_vw;

ROLL LNAME FNAME SID

---------- --------------- --------------- ----------

3001 Agrawal Aditi 101

3002 Jadhao Ankita 102

3003 Rathi Charulata 101

3004 Rathi Divya 101

3005 Gadiya Minal 103

3006 Naxane Prajakta 101

3007 Borele Pranali 102

3008 Kushwaha Preeti 103

3009 Mundada Priya 102

3010 Agrawal Ruchi 110

3011 Khatwani Sneha 110

4010 Gandhi Kripali 106

5001 Nisal Namita 107

5002 Pathan Needa 109

5003 Agrawal Nikita 108

5004 Kalra Nikita 108

5005 Sharma Roopa 109

5006 Adgurwar Sayli 108

5007 Harode Shivani 107

5008 Thokal Shweta 108

5009 Gupta Suruchi 107

5010 Sharma Aashish 109

ROLL LNAME FNAME SID

---------- --------------- --------------- ----------

5011 Ganediwal Abhay 109

5012 Dixit Abhishek 107

4012 Tiwari Abhishek 105

4011 Parmar Abhishek 104

3025 Sheela Goenka 108

5031 Vallabh Shastri 109

50 rows selected.

SQL> selectroll,lname,fname,sid from student\_vw where roll=3025 or roll=5031;

ROLL LNAME FNAME SID

---------- --------------- --------------- ----------

3025 SheelaGoenka 108

5031 VallabhShastri 109

SQL> set linesize 120;

SQL> select \* from student;

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

---------- --------------- --------------- ---------------------

3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3002 Jadhao Ankita jadhaoar@rknec.edu MT14CS002 102

3003 Rathi Charulata rathics@rknec.edu MT14CS006 101

3004 Rathi Divya rathidv@rknec.edu MT14CS004 101

3005 Gadiya Minal gadiyams@rknec.edu MT14CS005 103

3006 Naxane Prajakta naxanepp@rknec.edu MT14CS003 101

3007 Borele Pranali borelepl@rknec.edu MT14CS007 102

3008 Kushwaha Preeti kushwahapk1@rknec.edu MT14CS008 103

3009 Mundada Priya mundadapp@rknec.edu MT14CS009 102

3010 Agrawal Ruchi agrawalrr3@rknec.edu MT14CS011 110

3011 Khatwani Sneha khatwanisa@rknec.edu MT14CS012 110

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

---------- --------------- --------------- ------------------------- --------- ----------

5011 Ganediwal Abhay ganediwalan@rknec.edu 14MTEN007 109

5012 Dixit Abhishek dixitaa1@rknec.edu 14MTEN008 107

4012 Tiwari Abhishek tiwariad1@rknec.edu 14MTIT011 105

4011 Parmar Abhishek parmarar@rknec.edu 14MTIT012 104

3025 Sheela Goenka 108

5031 Vallabh Shastri 109

50 rows selected.

SQL> create view student\_affl\_vw as select roll,lname,fname,branch from student;

create view student\_affl\_vw as select roll,lname,fname,branch from student

\*

ERROR at line 1:

ORA-00904: "BRANCH": invalid identifier

SQL> create view student\_affl\_vw as select roll,lname,fname,branch from student s join dept f on s.advisor=f.hod\_id;

View created.

SQL> insert into student\_affl\_vw values(4013, 'Dawson', 'Ellis', 'IT');

insert into student\_affl\_vw values(4013, 'Dawson', 'Ellis', 'IT')

\*

ERROR at line 1:

ORA-01779: cannot modify a column which maps to a non key-preserved table

----------------------------------------------------------------------------------------------

**QUERY-06 : Write SQL code to create a view STUDENT\_VW\_RO on STUDENT table with READ ONLY option with same attribute set as in STUDENT\_VW.List the contents of STUDENT\_VW\_RO. Now insert a student – Rory McLaren, 5015 – using STUDENT\_VW\_RO. Observe the effect.**

SQL> create view student\_vw\_ro as select roll,lname,fname,advisor as sid from student with read only;

View created.

SQL> select \* from student\_vw\_ro;

ROLL LNAME FNAME SID

---------- --------------- --------------- ----------

3001 Agrawal Aditi 101

3002 Jadhao Ankita 102

3003 Rathi Charulata 101

3004 Rathi Divya 101

3005 Gadiya Minal 103

3006 Naxane Prajakta 101

3007 Borele Pranali 102

3008 Kushwaha Preeti 103

3009 Mundada Priya 102

3010 Agrawal Ruchi 110

3011 Khatwani Sneha 110

ROLL LNAME FNAME SID

---------- --------------- --------------- ----------

3023 Jain Saurabh 102

3024 Sathawane Vishal 103

4001 Jain Aarju 104

4002 Dixit Ankita 105

4003 Tiwari Ankita 106

4004 Shah Arti 105

4005 Hinge Ashwini 106

4006 Singh Asmita 104

4007 Chaudhari Bhagyashree 106

4008 Madan Devyani 104

4009 Bhojwani Kanchan 105

ROLL LNAME FNAME SID

----- --------------- --------------- ----------

5011 Ganediwal Abhay 109

5012 Dixit Abhishek 107

4012 Tiwari Abhishek 105

4011 Parmar Abhishek 104

48 rows selected.

SQL> insert into student\_vw\_rovalues(5015,'Rory', 'McLaren',109);

insert into student\_vw\_ro values(5015,'Rory', 'McLaren',109)

\*

ERROR at line 1:

ORA-42399: cannot perform a DML operation on a read-only view

--------------------------------------------------------------------------------------

**QUERY-07 : Write SQL code to create a view STUDENT\_VW\_CK on STUDENT table with CHECK OPTION and CONSTRAINT with same attribute set as in STUDENT\_VW but will include those tuples having advisors among 101, 106 and 107. Name the constraint as STUDENT\_ADV\_CK.List the contents of STUDENT\_VW\_CK. Now insert a student – Albert Lambda, 4014 – using STUDENT\_VW\_CK. Observe the effect.**

SQL> create view student\_vw\_ck as select roll,lname,fname,advisor as sid from student where advisor=101 or advisor=106 or advisor=107 with check option constraint student\_adv\_ck;

View created.

SQL> insert into student\_vw\_ckvalues(4014,’Albert’,’Lambda’ 107);

SQL> select \* from student\_vw\_ck;

ROLL LNAME FNAME SID

---------- --------------- --------------- ----------

3001 Agrawal Aditi 101

3003 Rathi Charulata 101

3004 Rathi Divya 101

3006 Naxane Prajakta 101

3016 Bhogadhi Vani 101

3020 Palaskar Hanok 101

4003 Tiwari Ankita 106

4005 Hinge Ashwini 106

4007 Chaudhari Bhagyashree 106

4010 Gandhi Kripali 106

5001 Nisal Namita 107

5007 Harode Shivani 107

5009 Gupta Suruchi 107

5012 Dixit Abhishek 107

4014 Albert Lambda 107

15 rows selected.

--------------------------------------------------------------------------------------

**QUERY-08 : Write a SQL code to create a private synonym TEACHER\_SN for STAFF. Use this synonym to show contents of STAFF. A faculty named Geoffrey Ball has been appointed as Associate in EN. Insert Ball record using TEACHER\_SN. Observe contents of STAFF table.**

SQL> create synonym teacher\_sn for staff;

Synonym created.

SQL>desc teacher\_sn;

Name Null? Type

----------------------------------------- -------- ----------------------------

SID NOT NULL NUMBER(3)

NAME NOT NULL VARCHAR2(25)

BRANCH CHAR(2)

DESG NOT NULL VARCHAR2(9)

JOIN\_DT NOT NULL DATE

SQL>desc user\_synonyms;

Name Null? Type

----------------------------------------- -------- ----------------------------

SYNONYM\_NAME NOT NULL VARCHAR2(30)

TABLE\_OWNER VARCHAR2(30)

TABLE\_NAME NOT NULL VARCHAR2(30)

DB\_LINK VARCHAR2(128)

SQL> insert into teacher\_snvalues(111,'GeoffreyBal', 'EN', 'ASSOCIATE','13-apr-2016');

1 row created.

SQL> select \* from teacher\_sn;

SID NAME BR DESG JOIN\_DT

---------- ----------------------- -- --------- ---------

101 KamalkantMarathe CS PROFESSOR 12-JUN-05

102 AdisheshVidyarthi CS ASSOCIATE 22-JUL-06

103 AasawariDeodhar CS ASSISTANT 13-OCT-07

104 Deo Narayan Mishra IT ASSISTANT 13-OCT-07

105 Jasmine Paul IT ASSOCIATE 12-MAY-08

106 Manishi Singh IT PROFESSOR 11-NOV-09

107 RamanathanArun EN PROFESSOR 12-AUG-05

108 Saifuddin Sheikh EN ASSOCIATE 19-SEP-10

109 BabushBaltiwala EN ASSISTANT 12-APR-12

110 Christopher Kundu CS ASSISTANT 13-MAR-13

111 GeoffreyBal EN ASSOCIATE 13-APR-16

11 rows selected.

SQL> select \* from staff;

SID NAME BR DESG JOIN\_DT

----- ----------------------- --- --------- ---------

101 KamalkantMarathe CS PROFESSOR 12-JUN-05

102 AdisheshVidyarthi CS ASSOCIATE 22-JUL-06

103 AasawariDeodhar CS ASSISTANT 13-OCT-07

104 Deo Narayan Mishra IT ASSISTANT 13-OCT-07

105 Jasmine Paul IT ASSOCIATE 12-MAY-08

106 Manishi Singh IT PROFESSOR 11-NOV-09

107 RamanathanArun EN PROFESSOR 12-AUG-05

108 Saifuddin Sheikh EN ASSOCIATE 19-SEP-10

109 BabushBaltiwala EN ASSISTANT 12-APR-12

110 Christopher Kundu CS ASSISTANT 13-MAR-13

111 GeoffreyBal EN ASSOCIATE 13-APR-16

11 rows selected.

----------------------------------------------------------------------------------------------

**QUERY-09 : Change to User – SYSTEM. Write a SQL code to create a table STAFF (after ensuring object‘s non-existence)while excluding RI-constraint enforcement but enforcing domain constraint instead.Populate STAFF with first 8 tuples as indicated. Now, create a public synonym TEACHER\_SNP for STAFF and verify its presence by inserting tuple-9 using TEACHER\_SNP. [Allocate to user CS6XX the privilege to SELECT, INSERT on STAFF].**

SQL> connect to system/system;

SP2-0306: Invalid option.

Usage: CONN[ECT] [{logon|/|proxy} [AS {SYSDBA|SYSOPER|SYSASM}] [edition=value]]

where <logon> ::= <username>[/<password>][@<connect\_identifier>]

<proxy> ::= <proxyuser>[<username>][/<password>][@<connect\_identifier>]

SQL> drop table staff3;

Table dropped.

SQL> PAUSE 'PROCEED TO CREATE STAFF......'

SQL> CREATE TABLE STAFF3

2 (

3 SID NUMBER(3),

4 NAME VARCHAR2(25) NOT NULL,

5 BRANCH CHAR(2),

6 DESG VARCHAR2(9) NOT NULL,

7 JOIN\_DT DATE NOT NULL,

8 CONSTRAINT SID\_PK3 PRIMARY KEY (SID),

9 CONSTRAINT DESG\_CHECK3 CHECK (DESG IN ('PROFESSOR','ASSISTANT','ASSOCIATE')),

10 CONSTRAINT SID\_CHECK3 CHECK (SID>100)

11 );

Table created.

SQL> pause 'insert rows...'

SQL> INSERT INTO STAFF3 VALUES (101, 'KamalkantMarathe', 'CS', 'PROFESSOR', '12-Jun-2005');

1 row created.

SQL> INSERT INTO STAFF3 VALUES (102, 'AdisheshVidyarthi', 'CS', 'ASSOCIATE', '22-Jul-2006');

1 row created.

SQL> INSERT INTO STAFF3 VALUES (103, 'AasawariDeodhar', 'CS', 'ASSISTANT', '13-Oct-2007');

1 row created.

SQL> INSERT INTO STAFF3 VALUES (104, 'Deo Narayan Mishra', 'IT', 'ASSISTANT', '13-Oct-2007');

1 row created.

SQL> INSERT INTO STAFF3 VALUES (105, 'Jasmine Paul', 'IT', 'ASSOCIATE', '12-May-2008');

1 row created.

SQL> INSERT INTO STAFF3 VALUES (106, 'Manishi Singh', 'IT', 'PROFESSOR', '11-Nov-2009');

1 row created.

SQL> INSERT INTO STAFF3 VALUES (107, 'RamanathanArun', 'EN', 'PROFESSOR', '12-Aug-2005');

1 row created.

SQL> INSERT INTO STAFF3 VALUES (108, 'Saifuddin Sheikh', 'EN', 'ASSOCIATE', '19-Sep-2010');

1 row created.

SQL> pause 'create synonym...'

SQL> create public synonym teacher1\_sn for staff3;

Synonym created.

SQL> INSERT INTO teacher1\_sn VALUES(109, 'BabushBaltiwala', 'EN', 'ASSISTANT', '12-Apr-2012');

1 row created.

SQL> select \* from teacher1\_sn;

SID NAME BR DESG JOIN\_DT

---------- ------------------------- -- --------- ---------

101 Kamalkant Marathe CS PROFESSOR 12-JUN-05

102 Adishesh Vidyarthi CS ASSOCIATE 22-JUL-06

103 Aasawari Deodhar CS ASSISTANT 13-OCT-07

104 Deo Narayan Mishra IT ASSISTANT 13-OCT-07

105 Jasmine Paul IT ASSOCIATE 12-MAY-08

106 Manishi Singh IT PROFESSOR 11-NOV-09

107 Ramanathan Arun EN PROFESSOR 12-AUG-05

108 Saifuddin Sheikh EN ASSOCIATE 19-SEP-10

109 Babush Baltiwala EN ASSISTANT 12-APR-12

9 rows selected.

SQL> select \* from staff3;

SID NAME BR DESG JOIN\_DT

---------- ------------------------- -- --------- ---------

101 Kamalkant Marathe CS PROFESSOR 12-JUN-05

102 Adishesh Vidyarthi CS ASSOCIATE 22-JUL-06

103 Aasawari Deodhar CS ASSISTANT 13-OCT-07

104 Deo Narayan Mishra IT ASSISTANT 13-OCT-07

105 Jasmine Paul IT ASSOCIATE 12-MAY-08

106 Manishi Singh IT PROFESSOR 11-NOV-09

107 Ramanathan Arun EN PROFESSOR 12-AUG-05

108 Saifuddin Sheikh EN ASSOCIATE 19-SEP-10

109 Babush Baltiwala EN ASSISTANT 12-APR-12

9 rows selected.

SQL> pause 'grant permission'

SQL> grant select,delete on teacher1\_sn to cs630;

Grant succeeded.

--------------------------------------------------------------------------------------

**QUERY-10 : Change to User – CS6XX. Write a SQL code to display the contents of STAFF table of SYSTEM user with/without using TEACHER\_SNP.Now insert tuple-10 and tuple-11 using TEACHER\_SNP.**

SQL> connect to cs634/cs634;

SP2-0306: Invalid option.

Usage: CONN[ECT] [{logon|/|proxy} [AS {SYSDBA|SYSOPER|SYSASM}] [edition=value]]

where <logon> ::= <username>[/<password>][@<connect\_identifier>]

<proxy> ::= <proxyuser>[<username>][/<password>][@<connect\_identifier>]

SQL> pause 'view synonym...'

SQL> select \* from staff3;

SID NAME BR DESG JOIN\_DT

---------- ------------------------- -- --------- ---------

101 Kamalkant Marathe CS PROFESSOR 12-JUN-05

102 Adishesh Vidyarthi CS ASSOCIATE 22-JUL-06

103 Aasawari Deodhar CS ASSISTANT 13-OCT-07

104 Deo Narayan Mishra IT ASSISTANT 13-OCT-07

105 Jasmine Paul IT ASSOCIATE 12-MAY-08

106 Manishi Singh IT PROFESSOR 11-NOV-09

107 Ramanathan Arun EN PROFESSOR 12-AUG-05

108 Saifuddin Sheikh EN ASSOCIATE 19-SEP-10

109 Babush Baltiwala EN ASSISTANT 12-APR-12

110 Christopher Kundu CS ASSISTANT 13-MAR-13

10 rows selected.

SQL> select \* from teacher1\_sn;

SID NAME BR DESG JOIN\_DT

---------- ------------------------- -- --------- ---------

101 Kamalkant Marathe CS PROFESSOR 12-JUN-05

102 Adishesh Vidyarthi CS ASSOCIATE 22-JUL-06

103 Aasawari Deodhar CS ASSISTANT 13-OCT-07

104 Deo Narayan Mishra IT ASSISTANT 13-OCT-07

105 Jasmine Paul IT ASSOCIATE 12-MAY-08

106 Manishi Singh IT PROFESSOR 11-NOV-09

107 Ramanathan Arun EN PROFESSOR 12-AUG-05

108 Saifuddin Sheikh EN ASSOCIATE 19-SEP-10

109 Babush Baltiwala EN ASSISTANT 12-APR-12

110 Christopher Kundu CS ASSISTANT 13-MAR-13

10 rows selected.

SQL> pause 'insert 10 and 11 tuple'

SQL>INSERT INTO teacher1\_sn VALUES(110,'Christopher Kundu', 'CS', 'ASSISTANT', '13-Mar-2013');

INSERT INTO teacher1\_sn VALUES (110, 'Christopher Kundu', 'CS', 'ASSISTANT', '13-Mar-2013')

\*

ERROR at line 1:

ORA-00001: unique constraint (SYSTEM.SID\_PK3) violated

SQL> INSERT INTO teacher1\_sn VALUES (111, 'geoffreyball','EN' ,'ASSOCIATE', '12-Apr-2012');

1 row created.

----------------------------------------------------------------------------------------------

**QUERY-11 : Write a SQL code to create a unique B-Tree index on LNAME attribute of STUDENT.Observe the output and report the problem(s). If it fails, create B-Tree index and test it to locate a certain customer by last name.Now create a concatenated B-tree index on (LNAME, FNAME) attributes of STUDENT and test the index.Also list all indexes for CS6XX for the current database schema [use USER\_INDEXES table].**

SQL> create unique index stud\_ndx on student(lname);

create unique index stud\_ndx on student(lname)

\*

ERROR at line 1:

ORA-01452: cannot CREATE UNIQUE INDEX; duplicate keys found

SQL> create index stud\_ndx on student(lname);

Index created.

SQL> select \* from student where lname='Agrawal';

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

---------- --------------- --------------- ------------------------- --------- ----------

3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3010 Agrawal Ruchi agrawalrr3@rknec.edu MT14CS011 110

5003 Agrawal Nikita agrawalno@rknec.edu 14MTEN004 108

3 rows selected.

SQL> create index stud\_ndxlf on student(lname,fname);

Index created.

SQL> select \* from student where lname like 'Agrawal';

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

---------- --------------- --------------- ------------------------- --------- ----------

3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3010 Agrawal Ruchi agrawalrr3@rknec.edu MT14CS011 110

5003 Agrawal Nikita agrawalno@rknec.edu 14MTEN004 108

3 rows selected.

SQL> select \* from student where lname like 'Agrawal' or fname like 'Ruchi';

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

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3010 Agrawal Ruchi agrawalrr3@rknec.edu MT14CS011 110

1 rows selected.

SQL> select index\_name from user\_indexes;

INDEX\_NAME

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SID\_PK3

SID\_PK2

SID\_PK1

STUD\_NDX

STUD\_NDXLF

UNIQUE\_STUD\_ENROLL

ROLL\_PK

UNIQUE\_STUD\_EMAIL

BRANCH\_PK

SID\_PK

SYS\_C0013047

INDEX\_NAME

------------------------------

LOGMNR\_I1KOPM$

LOGMNR\_I1SUBCOLTYPE$

LOGMNR\_I1OPQTYPE$

LOGMNR\_I2NTAB$

LOGMNR\_I1NTAB$

LOGMNR\_I1LOGMNR\_BUILDLOG

LOGMNR\_I1INDCOMPART$

LOGMNR\_I1INDSUBPART$

LOGMNR\_I2INDPART$

LOGMNR\_I1INDPART$

LOGMNR\_I1LOBFRAG$

INDEX\_NAME

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AQ$\_QUEUE\_TABLES\_PRIMARY

I1\_QUEUE\_TABLES

MVIEW$\_ADV\_JOURNAL\_PK

MVIEW$\_ADV\_INFO\_PK

MVIEW$\_ADV\_PARAMETERS\_PK

MVIEW$\_ADV\_OUTPUT\_PK

MVIEW$\_ADV\_ELIGIBLE\_PK

MVIEW$\_ADV\_CLIQUE\_PK

MVIEW$\_ADV\_GC\_PK

MVIEW$\_ADV\_FJG\_PK

MVIEW$\_ADV\_AJG\_PK

INDEX\_NAME

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MVIEW$\_ADV\_ROLLUP\_PK

MVIEW$\_ADV\_LEVEL\_PK

MVIEW$\_ADV\_LOG\_PK

MVIEW$\_ADV\_FILTER\_PK

MVIEW$\_ADV\_TEMP\_IDX\_01

MVIEW$\_ADV\_PRETTY\_IDX\_01

MVIEW$\_ADV\_SQLDEPEND\_IDX\_01

MVIEW$\_ADV\_BASETABLE\_IDX\_01

MVIEW$\_ADV\_WORKLOAD\_PK

MVIEW$\_ADV\_WORKLOAD\_IDX\_01

LOGMNRT\_MDDL$\_PK

252 rows selected.

SQL>desc user\_indexes;

Name Null? Type

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INDEX\_NAME NOT NULL VARCHAR2(30)

INDEX\_TYPE VARCHAR2(27)

TABLE\_OWNER NOT NULL VARCHAR2(30)

TABLE\_NAME NOT NULL VARCHAR2(30)

TABLE\_TYPE VARCHAR2(11)

UNIQUENESS VARCHAR2(9)

COMPRESSION VARCHAR2(8)

PREFIX\_LENGTH NUMBER

TABLESPACE\_NAME VARCHAR2(30)

INI\_TRANS NUMBER

MAX\_TRANS NUMBER

INITIAL\_EXTENT NUMBER

NEXT\_EXTENT NUMBER

MIN\_EXTENTS NUMBER

MAX\_EXTENTS NUMBER

PCT\_INCREASE NUMBER

PCT\_THRESHOLD NUMBER

INCLUDE\_COLUMN NUMBER

FREELISTS NUMBER

FREELIST\_GROUPS NUMBER

PCT\_FREE NUMBER

LOGGING VARCHAR2(3)

BLEVEL NUMBER

LEAF\_BLOCKS NUMBER

DISTINCT\_KEYS NUMBER

AVG\_LEAF\_BLOCKS\_PER\_KEY NUMBER

AVG\_DATA\_BLOCKS\_PER\_KEY NUMBER

CLUSTERING\_FACTOR NUMBER

STATUS VARCHAR2(8)

NUM\_ROWS NUMBER

SAMPLE\_SIZE NUMBER

LAST\_ANALYZED DATE

DEGREE VARCHAR2(40)

INSTANCES VARCHAR2(40)

PARTITIONED VARCHAR2(3)

TEMPORARY VARCHAR2(1)

GENERATED VARCHAR2(1)

SECONDARY VARCHAR2(1)

BUFFER\_POOL VARCHAR2(7)

FLASH\_CACHE VARCHAR2(7)

CELL\_FLASH\_CACHE VARCHAR2(7)

USER\_STATS VARCHAR2(3)

DURATION VARCHAR2(15)

PCT\_DIRECT\_ACCESS NUMBER

ITYP\_OWNER VARCHAR2(30)

ITYP\_NAME VARCHAR2(30)

PARAMETERS VARCHAR2(1000)

GLOBAL\_STATS VARCHAR2(3)

DOMIDX\_STATUS VARCHAR2(12)

DOMIDX\_OPSTATUS VARCHAR2(6)

FUNCIDX\_STATUS VARCHAR2(8)

JOIN\_INDEX VARCHAR2(3)

IOT\_REDUNDANT\_PKEY\_ELIM VARCHAR2(3)

DROPPED VARCHAR2(3)

VISIBILITY VARCHAR2(9)

DOMIDX\_MANAGEMENT VARCHAR2(14)

SEGMENT\_CREATED VARCHAR2(3)

--------------------------------------------------------------------------------------

**QUERY-12 :Write a SQL code to create a function-based index on LNAME attribute of students such that case-sensitivity is superseded by converting to uppercase/lowercase and test the index.Now create a concatenated function-based index on (LNAME, FNAME) attributes of STUDENT and test the index.[Before testing the function-based index, the DBA must set the initialization parameter QUERY\_REWRITE\_ENABLED to true.Use… CONNECT system/manager ALTER SYSTEM SET QUERY\_REWRITE\_ENABLED=TRUE;'and to leave enter EXIT.**

SQL> alter system set query\_rewrite\_enabled=true;

System altered.

SQL> create index upper\_lname on student(upper(lname));

Index created.

SQL> select \* from student where upper(lname)='AGRAWAL';

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

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3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3010 Agrawal Ruchi agrawalrr3@rknec.edu MT14CS011 110

5003 Agrawal Nikita agrawalno@rknec.edu 14MTEN004 108

SQL> create index upper\_lfname on student(upper(fname),upper(lname));

Index created.

SQL> select \* from student where upper(lname)='AGRAWAL' or upper(fname)='ABHISHEK';

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

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3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3010 Agrawal Ruchi agrawalrr3@rknec.edu MT14CS011 110

5003 Agrawal Nikita agrawalno@rknec.edu 14MTEN004 108

5012 Dixit Abhishek dixitaa1@rknec.edu 14MTEN008 107

4012 Tiwari Abhishek tiwariad1@rknec.edu 14MTIT011 105

4011 Parmar Abhishek parmarar@rknec.edu 14MTIT012 104

6 rows selected.

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**QUERY NO-13 : Write a SQL script that will (a) insert a student KrishhUmredkar with roll number 5014; (b) Assign SheelaGoenka to advisor 110; (c) Assign VallabhShashri to advisor 109. Before insert create a savepoint SP\_NONE. After insert create savepoint SP\_KRISHH. Create savepoints SP\_SHEELA and SP\_VALLABH after mentioned updates in sequence.**

SQL> SAVEPOINT SP;

Savepoint created.

SQL> INSERT INTO STUDENT(ROLL,FNAME,LNAME)VALUES(5014,'Krish','Umredkar');

1 row created.

SQL> SAVEPOINT SP\_krish;

Savepoint created.

SQL> select \* from student;

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

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3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3002 Jadhao Ankita jadhaoar@rknec.edu MT14CS002 102

3003 Rathi Charulata rathics@rknec.edu MT14CS006 101

5012 Dixit Abhishek dixitaa1@rknec.edu 14MTEN008 107

4012 Tiwari Abhishek tiwariad1@rknec.edu 14MTIT011 105

4011 Parmar Abhishek parmarar@rknec.edu 14MTIT012 104

49 rows selected.

SQL> UPDATE student SET ADVISOR=130 WHERE LNAME='Goenka' and FNAME='SHEELA';

1 row updated.

SQL> SAVEPOINT SP\_SHEELA;

Savepoint created.

SQL> UPDATE student SET ADVISOR=109 WHERE LNAME='Shastri' and FNAME='Vallabh';

1 row updated.

SQL> SAVEPOINT SP\_vallabh;

Savepoint created.

SQL> select \* from student;

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

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3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3002 Jadhao Ankita jadhaoar@rknec.edu MT14CS002 102

3003 Rathi Charulata rathics@rknec.edu MT14CS006 101

49 rows selected.

----------------------------------------------------------------------------------

**QUERY NO-14 : Write SQL code to reinstate to database state after executing Query-13(a). Now revert to regain the database state before executing Query-13.**

SQL> rollback to sp\_krish;

Rollback complete.

SQL> select \* from student;

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

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3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3002 Jadhao Ankita jadhaoar@rknec.edu MT14CS002 102

3003 Rathi Charulata rathics@rknec.edu MT14CS006 101

5012 Dixit Abhishek dixitaa1@rknec.edu 14MTEN008 107

4012 Tiwari Abhishek tiwariad1@rknec.edu 14MTIT011 105

4011 Parmar Abhishek parmarar@rknec.edu 14MTIT012 104

5014 Umredkar Krish

49 rows selected.

SQL> rollback to sp;

Rollback complete.

SQL> select \* from student;

ROLL LNAME FNAME EMAIL ENROLL ADVISOR

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3001 Agrawal Aditi agrawalaa8@rknec.edu MT14CS001 101

3002 Jadhao Ankita jadhaoar@rknec.edu MT14CS002 102

3003 Rathi Charulata rathics@rknec.edu MT14CS006 101

5012 Dixit Abhishek dixitaa1@rknec.edu 14MTEN008 107

4012 Tiwari Abhishek tiwariad1@rknec.edu 14MTIT011 105

4011 Parmar Abhishek parmarar@rknec.edu 14MTIT012 104

49 rows selected.

SQL> spool off;