CREATE TABLE STUDENT (USN VARCHAR (10),

SNAME VARCHAR (20),

ADDRESS VARCHAR (20),

PHONE NUMBER (10),

GENDER CHAR (1),

CONSTRAINT PKST PRIMARY KEY(USN));

CREATE TABLE SEMSEC (SSID VARCHAR (5),

SEM NUMBER (2),

SEC CHAR (1),

CONSTRAINT PKSEM PRIMARY KEY(SSID));

CREATE TABLE CLASS (USN VARCHAR (10),

SSID VARCHAR (5),

CONSTRAINT PKCL PRIMARY KEY (USN, SSID),

CONSTRAINT FKUSN FOREIGN KEY (USN) REFERENCES STUDENT (USN),

CONSTRAINT FKSSID FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));

CREATE TABLE SUBJECT (SUBCODE VARCHAR (8),

TITLE VARCHAR (20),

SEM NUMBER (2),

CREDITS NUMBER (5),

CONSTRAINT PKSUB PRIMARY KEY (SUBCODE));

CREATE TABLE IAMARKS (USN VARCHAR (10),

SUBCODE VARCHAR (8),

SSID VARCHAR (5),

TEST1 NUMBER,

TEST2 NUMBER,

TEST3 NUMBER,

FINALIA NUMBER,

CONSTRAINT PKIA PRIMARY KEY (USN, SUBCODE, SSID),

CONSTRAINT FKUS FOREIGN KEY (USN) REFERENCES STUDENT (USN),

CONSTRAINT FKSU FOREIGN KEY (SUBCODE) REFERENCES SUBJECT (SUBCODE),

CONSTRAINT FKSSI FOREIGN KEY (SSID) REFERENCES SEMSEC (SSID));

**Queries**

1.List all the student details studying in fourth semester ‘C’ section.

SELECT S.\*, SS.SEM, SS.SEC

FROM STUDENT S, SEMSEC SS, CLASS C

WHERE S.USN = C.USN AND

SS.SSID = C.SSID AND

SS.SEM = 4 AND

SS.SEC='C';

2. Compute the total number of male and female students in each semester and in each

section.

SELECT SS.SEM, SS.SEC, S.GENDER, COUNT (S.GENDER) AS COUNT

FROM STUDENT S, SEMSEC SS, CLASS C

WHERE S.USN = C.USN AND

SS.SSID = C.SSID

GROUP BY SS.SEM, SS.SEC, S.GENDER

ORDER BY SEM;

3.Create a view of Test1 marks of student USN ‘1BI15CS101’ in all subjects.

CREATE VIEW STU\_TEST1\_MARKS\_VIEW

AS

SELECT TEST1, SUBCODE

FROM IAMARKS

WHERE USN = '1BI15CS101';

4. Calculate the FinalIA (average of best two test marks) and update the corresponding table for all students.

UPDATE IAMARKS SET FINALIA=((TEST1+TEST2+TEST3)-LEAST(TEST1,TEST2,TEST3))/2;

5.Categorize students based on the following criterion:

If FinalIA = 17 to 20 then CAT = ‘Outstanding’

If FinalIA = 12 to 16 then CAT = ‘Average’

If FinalIA< 12 then CAT = ‘Weak’

Give these details only for 8th semester A, B, and C section students.

SELECT S.USN,S.SNAME,S.ADDRESS,S.PHONE,S.GENDER,

IA.SUBCODE,

(CASE

WHEN IA.FINALIA BETWEEN 17 AND 20 THEN 'OUTSTANDING'

WHEN IA.FINALIA BETWEEN 12 AND 16 THEN 'AVERAGE'

ELSE 'WEAK'

END) AS CAT

FROM STUDENT S, SEMSEC SS, IAMARKS IA, SUBJECT SUB

WHERE S.USN = IA.USN AND

SS.SSID = IA.SSID AND

SUB.SUBCODE = IA.SUBCODE AND

SUB.SEM = 8 ;;