**Problems for practice and End Semester ExaminationLab Questions**

**INSTRUCTIONS FOR END SEM EXAMINATION:**

1. **Carry the questions printout with out fail.**
2. **Carry ample sheets to write the examination.**
3. **ER diagram is compulsory for the questions you get.**
4. **Table creation syntax for all the tables must be specified.**
5. **Just one record insertion syntax is enough.**
6. **Marks distribution is as follows: 40 marks in total**
7. **10 marks for ER diagram.**
8. **5 marks for all the syntax written correctly.**
9. **10 marks for table creation and insertion of the required records appropriate to the queries(first read the queries and then decide about the records to be inserted)**
10. **10 marks for sql query execution.**
11. **5 marks for plsql execution.**

* **1 -> MEDICINE TRANSACTION SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME OF THE ENTITY | ATTRIBUTES | PRIMARY KEY |
| MEDICINE | MEDCODE, MEDNAME, MGGDT,EXPDT, PRICE | MEDCODE |
| DEALER | DCODE,DNAME, DLOC. | DCODE |
| BILL | BILLNO, BILLAMT | BILLNO |
| INDUSTRY | INDNAME, INDLOC | IND |
| RELATES\_TO | MEDCODE, BILLNO, BILLDT | FOREIDGN KEY TO BE CONSIDERED. |
| SUPPLIES | MEDCODE,DCODE | FOREIDGN KEY TO BE CONSIDERED. |
| SALES\_TO | DCODE, INDNAME | FOREIDGN KEY TO BE CONSIDERED. |
| MFD\_BY | MEDCODE, INDNAME | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES**:

1. List the medicine details manufactured by “DEXOVAN”
2. List the medicine name, bill amount, bill date for bill number 1205
3. List the medicines whose validity is more than two years.
4. List the medicine details related to highest paid bill.
5. List the medicine names of minimum selling medicine.

* **2-> BANKING TRANSACTION INFORAMTION SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTE | PRIMARY/FOREIGNM KEY |
| CUSTOMER | CID, CNAME, LOC, GENDER, DOB | CID |
| BANK\_BRN | BCODE, BLOC, BSTATE | BCODE |
| DEPOSIT | DACNO, DTYPE, DDATE, DMDATE, DAMT, DMAMT | DACNO |
| LOAN | LACNO, LTYPE, LDATE, AMT | LACNO |
| ACCOUNTS\_IN | BCODE, CID | FOREIDGN KEY TO BE CONSIDERED. |
| SAVES | CID, DACNO | FOREIDGN KEY TO BE CONSIDERED. |
| BORROWS | CID, LACNO | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES:**

1. List the interest earned by customer per annum in the RD scheme that is continued for 5 years along with the RD account number.
2. List the loan account number, tenure, interest earned by the bank for a home loan that has lasted for longest tenure.
3. List the customers having mire than one account.
4. List the deposit account details of the youngest male customer of KOLKATA.
5. List the customer who has borrowed highest amount of home loan.

* **3-> PUBLICATION MANAGEMENT SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTES | PRIMARY KEY |
| AUTHOR | AUTHCODE, AUTHNAME | AUTHCODE |
| BOOK | BOOKCODE, BOOKNAME | BOOKCODE |
| PUBLISHER | PUBCODE, PUBNAME, PUBCITY | PUBCODE |
| WRITES | AUTHCODE, BOOKCODE | FOREIDGN KEY TO BE CONSIDERED. |
| SENDS | AUTHCODE, PUBCODE | FOREIDGN KEY TO BE CONSIDERED. |
| PUBLISHES | BOOKCODE, PUBCODE | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES:**

1. List the name of the books published from a city having maximum number of publishers.
2. List the name of the book whose author name contains the character “go” in it.
3. List the name of the author who has written more than one book.
4. Count the total number of book published by ‘BPB”
5. List the publisher name who has published a book written by more than one author.

* **4->TRAINING MANAGEMENT SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTES | PRIMARY/FOREIGN KEY |
| STUDENT | STDNO, SNAME | STDNO |
| COURSE | CCODE,SNAME,CCOST | CCODE |
| INSTITUTE | INSTNAME, PHONE | INSTNAME |
| PROJECT | PCODE,PNAME | PCODE |
| DOES | STDNO, CCODE | FOREIDGN KEY TO BE CONSIDERED. |
| CONDUCTS | CCODE, INSTNAME | FOREIDGN KEY TO BE CONSIDERED. |
| EXECUTES | STDNO, PCODE | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES**:

1. List the institutes, which conducts more than one course.
2. List the project, which is developed using VB software.
3. List the student name who has done the costliest course.
4. List the project details executed by “RAM”
5. List the student details who has done more than one course.

* **5-> TRANSPORT MANAGEMENT SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTES | PRIMARY/FOREIGN KEY |
| BUS | BUSNO, CATEGPORY, SOURCE, DESTINATION, DISTANCE | BUSNO |
| BUS\_DEPOT | DEPOCODE, DEPOCITY | DEPOCODE |
| TICKET | TICKETNO, BOOKDT, FARE | TICEKTNO |
| PASSENGER | PNAME, AGE, GENDER | PNAME,AGE |
| LEAVES | BUSNO, DEPOCODE | FOREIDGN KEY TO BE CONSIDERED. |
| BOOKED\_IN | BUSNO, TICKETNO | FOREIDGN KEY TO BE CONSIDERED. |
| BVELONGS | TICKETNO, SEATNO | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES:**

1. List the bus details in which Senior citizens are travelling.
2. List the total earnings from the bus starting from Ranchi depot.
3. List the name, seat number of female passengers travelling to “HAZARIBAG”.
4. List the age,destination and booking date of passenger “PRANAB”.
5. List the passengers who are travelling minimum distance by bus.

* **6-> EMPLOYEE INFORMATION SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTES | PRIMARY/FOREIGN KEY |
| EMPLOYEE | ENO, ENAME, GENDER, EPLACE,SALARY, DOB, DOJ | ENO |
| SKILL | SCODE, SKILLCAT | SCODE |
| DEPARTMENT | DNO, DNAME, HOD | DNO |
| QUALIFICATION | QCODE, DEGREE, DISCIPLINE | QCODE |
| WORKS\_IN | ENO, DNO | FOREIDGN KEY TO BE CONSIDERED. |
| POSSES | ENO, SCODE | FOREIDGN KEY TO BE CONSIDERED. |
| KEEPING | ENO, QCODE | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES:**

1. List the employee name, department name in which a female employee having B.Tech qualification is working.
2. List the employee name, department name of the employee whose employee code starts with the letter “G”, has served maximum number of years in the organization and having the skill of “Programming”.
3. List the employee name, qualification of the employee who has joined service at younger age.
4. List the employee name who belongs to “ADMIN” Department and having skill in “ADMISNISTRATION”.
5. List the employee number, department number , qualification code and skill code of the youngest male employee.

* **7-> SALES TRACKING SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTE | PRIMARY/FOREIGN KEY |
| SALES\_REP | REPCODE, REPNAME,SALARY | REPCODE |
| COMPANY | COMHQ, COMNAME | COMHQ |
| PRODUCT | PCODE, PNAMW,PCOM | PCODE |
| RECRUIT | REPCODE,COMNAME. | FOREIDGN KEY TO BE CONSIDERED. |
| SALES | REPCODE, PCODE, QTYSOLD | FOREIDGN KEY TO BE CONSIDERED. |
| OWNS | COMNAME, PCODE | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES:**

1. List the commission earned by selling product P1.
2. List the Representative who are selling the similar product of different companies.
3. List the income of that representative who is drawing maximum salary(income=salary+commission\*quantity sold)
4. List the representative name, company name, product name and sale of product whose commission is minimum.
5. List the products sold by “ASHOK”.

* **8-> TEACHING ACTIVITY INFORMATION SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTE | PRIMARY/FOREIGN KEY |
| PUPIL | ROLLNO, NAME, DOB, GENDER | ROLLNO |
| STREAM | SCODE,SNAME | SCODE |
| SUBJECT | SUBCODE,SUBNAME | SUBCODE |
| TEACHER | PNO, NAME, FACULTY | PNO |
| ENROL\_IN | ROLLNO,SCODE | FOREIDGN KEY TO BE CONSIDERED. |
| TAUGHT\_IN | SUBCODE,SCODE | FOREIDGN KEY TO BE CONSIDERED. |
| ALLOCATED | PNO,SCODE | FOREIDGN KEY TO BE CONSIDERED. |
| TEACHES | PNO,SUBCODE | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES:**

1. List the youngest male student who have enrolled in SCIENCE stream.
2. List the load distribution of COMMERCE faculty.
3. List the subjects studied by the oldest female student of science faculty.
4. List the name and stream of those students whose DOB is same.
5. List the teachers name along with subjects name, who are teaching more than one subject.

* **9->PATIENT DIAGNOSTICS INFORMATION SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTE | PRIMARY/FOREIGN KEY |
| PATIENT | PREGNO, PNAME, DOB, GENDER | PREGNO |
| DOCTOR | DREGNO, DNAME | DREGNO |
| OUTDOOR | OPDNO, BRANCH | OPDNO |
| MEDICAL\_TEST | TESTCODE, CHARGE | TESTCODE |
| VISITS | PREGNO,OPDNO, VDATE | FOREIDGN KEY TO BE CONSIDERED. |
| UNDERGOES | PREGNO, TESTCODE | FOREIDGN KEY TO BE CONSIDERED. |
| REFERS | DREGNO | FOREIDGN KEY TO BE CONSIDERED. |

**QUERIES:**

1. List the youngest male patient who has been treated in the ophthamological OPD.
2. List the doctors along with their OPD details.
3. List the patients who carried out more than one medical test.
4. List the patient wise income from the medical test “T2”.
5. List the test that has been carried out by maximum number of patients

* **10-> AUTOMOBILE SALES TRACKING SYSTEM**

|  |  |  |
| --- | --- | --- |
| NAME | ATTRIBUTE | PRIMARY/FOREIGN KEY |
| VEHICLE | VCODE, VTYPE, VCOST | VCODE |
| DEALER | DCODE, DNAME, DLOC | DCODE |
| SPARE | SCODE, STYPE, SCOST | SCODE |
| DEALS | VCODE, DCODE, V\_SYEAR, V\_SOLD | FOREIDGN KEY TO BE CONSIDERED. |
| KEEPS | DCODE, SCODE, S\_SYEAR, S\_SOLD | FOREIDGN KEY TO BE CONSIDERED. |

NOTE: V\_SYEAR(NUMBER): YEAR IN WHICH VEHICLE IS SOLD BY THE DEALER.

S\_SYEAR:(NUMBER): YEAR IN WHICH THE DEALER SELLS SPARES.

V\_SOLD(NUMBER): NUMBER OF VEHICLES SOLD BY THE DEALER.

S\_SOLD(NUMBER): QUANTITY OF SPARES SOLD BY THE DEALER.

**QUERIES:**

1. List the vehicle details of that vehicle which is sold in minimum number in the year 2006.
2. List the year wise total sale of that vehicle whose spare parts cost is maximum.
3. List the vehicle code, vehicle cost, spare code and spare cost details of “JEEP”.
4. List the selling statistics of dealer D2 in the year 2006.
5. List the dealer name, spare cost and selling year of those parts, which are sold in maximum number.

**PL/SQL QUESTIONS:**

1. Write a PL/SQL block to calculate the incentive of an employee whose ID is 110.

Sample table: Employee

Attributes: EMPLOYEE\_ID, FIRST\_NAME, LAST\_NAME, EMAIL, PHONE\_NUMBER, HIRE\_DATE, SALARY.

1. Write a PL/SQL block to adjust the salary of the employee whose ID 122 to 35000.
2. Write a PL/SQL program to arrange the number of two variable in such a way that the small number will store in num\_small variable and large number will store in num\_large variable.
3. Write a PL/SQL program to check whether a number is even or odd.
4. Write a PL/SQL program to check whether a given number is positive, negative or zero.
5. Write a PL/SQL program to check whether a given character is letter or digit.
6. Write a PL/SQL program to convert a temperature in scale Fahrenheit to Celsius and vice versa.
7. Write a program in PL/SQL to print the prime numbers between 1 to 50.
8. Write a program in PL/SQL to find the number of rows effected by the use of SQL%ROWCOUNT attributes of an implicit cursor
9. Write a program in PL/SQL to display a cursor based detail information of employees from employees table.

NOTE: PRACTICE THE ABOVE QUESTIONS.

WRITE THE PL SQL QUESTIONS IN THE RECORD BEFORE MARCH 31ST, AND SUBMIT WHEN YOU COME TO THE LAB.

PL SQL NOTES WILL BE GIVEN SHORTLY.

ALL THE BEST