



UGANDA BUSINESS AND TECHNICAL EXAMINATIONS BOARD

Business and Humanities Certificate Examinations

MAY-JUNE SERIES

PROGRAMME

PROFESSIONAL CERTIFICATE IN SOFTWARE ENGINEERING (PCSE)

PAPER NAME

DATABASE PROGRAMMING IN SQL SERVER
(PRACTICAL)

PAPER CODE

PCSE111/2

YEAR I, SEMESTER 1

4 HOURS

10TH MAY 2021

INSTRUCTIONS TO CANDIDATES

1. This paper consists of **four** practical questions.
 2. A candidate is required to answer **one compulsory practical question** only from section A carrying 40 marks.
 3. A candidate is required to answer **two question** from section B carrying 30 marks each.
 4. No communication is between candidates is allowed during the examination.
 5. Create a folder on a desktop in your **Name** and **Registration Number** where you will save all your work.
 6. Transfer all the work saved in a folder to a new **blank Compact Disk (CD)** at the end of the examination.
 7. Internet and Software Help wizards are strictly not allowed.
 8. **Do not** write anywhere on this question paper.
 9. All rough work should be done in the official answer booklet provided.
- Do not** move out with this question paper unless you are told to do so.

DATABASE PROGRAMMING IN SQL SERVER

Section A

Question One

Write queries for and find outputs for SQL queries which are based on the tables.

Table: VEHICLE		
VCODE	VEHICLETYPE	PERKM
V01	VOLVO BUS	150
V02	AC DELUX BUS	125
V03	ORDINARY BUS	80
V04	SUV	30
V05	CAR	18

Table:TRAVEL					
CNO	CNAME	TRAVELDATE	KM	VCODE	NOP
101	M. Ali	12/13/2015	200	V01	32
103	Ferdrick Sym	3/21/2016	120	V03	45
105	Deng Daniel	4/23/2016	450	V02	42
102	Colin Smalls	1/13/2016	80	V02	40
107	John Malina	2/10/2015	65	V04	2
104	Matthew	1/28/2016	90	V05	4
106	Jamir Harris	4/6/2016	100	V01	25

Note:

- PERKM is Freight Charges per kilometer.
- Km is kilometers Travelled
- NOP is number of passengers travelled in vehicle.

Create database called cars (2marks)

1. Create the above tables in your sql server and insert the record as shown above. (6marks)

2. To display CNO, CNAME, TRAVELDATE from the table TRAVEL in descending order of CNO. (4marks)

3. To display the CNAME of all customers from the table TRAVEL who are travelling by vehicle with code Vo₁ or Vo₂(4marks)
4. To display the CNO and CNAME of those customers from the table TRAVEL who travelled between '12/31/2015 and '05/01/2015'. (4marks)
5. To display all the details from table TRAVEL for the customers, who have travel distance more than 120 KM in ascending order of NOE(4marks)
6. SELECT COUNT (*), VCODE FROM TRAVEL GROUP BY VCODE HAVING COUNT (*) > 1; (2marks)
7. SELECT DISTINCT VCODE FROM TRAVEL ; (2marks)
8. SELECT A.VCODE, CNAME, VEHICLETYPE FROM TRAVEL A, VEHICLE B WHERE A.VCODE = B. VCODE and KM < 90; (2marks)
9. SELECT CNAME, KM*PERKM FROM TRAVEL A, VEHICLE B WHERE A.VCODE = B.VCODE AND A. VCODE 'V05'; (2marks)

Section B

Question Two

Write SQL queries on the basis of following table.

Rollno	Name	Class	Fess	Percentage
1	Daniel	X	3400	78
2	Ali	XI	2800	45
3	Elvis	X	3700	84
4	Alex	IX	2500	60

Create database called school (2marks)

Create the above table called students in your sql server and insert the record as shown above. (8marks)

1. Display all the records of table student. **(2marks)**
2. Display Roll Number, Name and Class of table Student **(2marks)**
3. Display records of students of class X. **(2marks)**
4. Display details of Ali. **(2marks)**

5. Display records of student paying fees less than 3000. **(2marks)**
6. Display fee of Daniel **(2marks)**
7. Display Class and percentage of Alex. **(2marks)**
8. Delete record of Daniel **(2marks)**
9. Display the structure of table student **(2marks)**
10. Change Ali's name to Owen. **(2marks)**

Question three

Create the following tables STOCK and DEALERS and answer (a) and (b) parts of this question:

Table : STOCK					
ItemNo	Item	Dcode	Qty	UnitPrice	StockDate
5005	Ball pen 0.5	101	100	1000	31-Mar-10
5003	Ball pen 0.25	102	150	1500	01-Jan-10
5002	Gel pen premium	101	125	1200	14-Feb-10
5006	Gel pen Classic	101	200	1300	01-Jan-09
5001	Eraser small	102	210	500	19-Mar-09
5004	Eraser big	102	60	2000	12-Dec-09
5009	Sharpener Classic	103	160	2500	23-Jan-09

Table: DEALERS	
Dcode	Dname
101	Reliable Stationers
103	Classic Plastics
102	Clear Deals

1) Create database called stationary (2marks)

Create the above tables in your sql server and insert the record as shown above. (8marks)

(a)Write SQL commands for the following statements:

1. To display the details of all Items in the STOCK table in ascending order of StockDate. (3marks)
2. To display ItemNo and Item name of those items from STOCK table whose UnitPrice is more than 1500 shillings(3marks)
3. To display the details of those items whose dealer code (Dcode) is 102 or quantity in STOCK (Qty) is more than 100 from the table Stock. (3marks)
4. To display maximum UnitPrice of items for each dealer individually as per Dcode from the table STOCK. (3marks)

(b)Give the output of the following SQL queries:

1. SELECT COUNT(DISTINCT Dcode)
FROM STOCK; (2marks)
2. SELECT Qty* UnitPrice FROM STOCK WHERE ItemNo=5006; (2marks)
3. SELECT Item, Dname FROM STOCK S, Dealers D WHERE S.Dcode=D.Dcode AND
ItemNo = 5004; (2marks)
4. SELECT MIN (StockDate) FROM STOCK; (2marks)

Question Four

Write SQL queries on the basis of following table.

Relation : Employee			
id	Name	Designation	Sal
101	Harry	Clerk	32000
102	Ajay	Manager	42500
103	Yvonne	Clerk	31500
104	Jacob	Advisor	32150
105	Vincent	Manager	42000
106	NULL	Clerk	32500

- 1) Create database called ABC_LTD (2marks)
- 2) Create the above tables in your sql server and insert the record as shown above. (8marks)
- 3)i. Count number of records in the table.(2marks)
- ii. Count number of names in the table. .(2marks)
- iii. Count number of designations. .(2marks)
- iv. Count number of clerks. .(2marks)
- v. Find sum of salaries of all employees. .(2marks)
- vi. Find maximum salary in the table. .(2marks)
- vii. Find minimum salary in the table. .(2marks)
- viii. Find average salary in the table. .(2marks)

- ix. Find minimum and maximum salary of Managers. .(2marks)
- x. Display number of records for each individual designation. .(2marks)
- xi. Display number of records along with sum of salaries for each individual designation where number of records are more than 1. .(2marks)
- xii. Display sum of salaries of clerks and managers.(2marks)

END