

Section A

[40 marks]

Answer ALL questions in this section.

A1. Fill in the blanks with the most suitable word(s) from the given list. [10]

attribute	select	where	Order by	Column alias
concatenation	column	database	tuple	comparison
row	relation	from	arithmetic	field

- (a) In relational database, table is also known as _____.
- (b) A single row or _____ representing all data required for a particular object.
- (c) A(n) _____ contains one particular type of information that is kept about all the rows in the table.
- (d) A(n) _____ can be found at the intersection of a row and a column. There can be only one value in it.
- (e) SQL is used to communicate with a _____.
- (f) The _____ clause is the first part of a query. This clause says which columns of information you want, what order you want them in, and what you want them to be called.
- (g) You can use arithmetic operators in any clause of a SQL statement except the _____ clause.
- (h) You can change a column heading by using a _____.

STRICTLY CONFIDENTIAL
CDB101 - June 2013 - QP

- (i) You can link columns to other columns, arithmetic expressions, or constant values to create a character expression by using the _____ operator.
- (j) Character literals are enclosed in _____ quotation marks.

A2. State whether the following statements are true /false. [8]

- (a) Each row of data in a table is uniquely identified by a foreign key.
- (b) DML stands for Division Multiply Language.
- (c) A field that has no value in it is called a field with a null value.
- (d) To access the database, you execute SQL statements.
- (e) & is the symbol for concatenation operator in SQL.
- (f) Default format for Date in Access is MM/DD/YYYY.
- (g) Count (fieldname) will ignore the fields that contain null values.
- (h) Foreign key is use to cross-references tables.

A3. Arrange the following operators based on its rules of precedence. [4]

OR, NOT, comparison operators, AND

A4. Display today's date and change the header to TODAY from a table TEST. [3]

A5. Which conversion function is used to convert date data type to character data type? [1]

A6. Write one SQL statement to display the item and price of all items in the table named stock. Price is calculated by multiplying the values in the two columns grade and weight. [5]

STRICTLY CONFIDENTIAL
CDB101 - June 2013 - QP

A7. Fill in the symbol or operator next to the description.

[9]

Description	Symbol or operator
(a) Represent One character	
(b) Represent any single character	
(c) Return TRUE if both component condition are TRUE	
(d) Return TRUE if either component condition are TRUE	
(e) Return TRUE if the following condition is FALSE	
(f) Between 2 value (inclusive)	
(g) Match any of a list of values	
(h) Match a character pattern	
(i) Is a null value	

Section B

[60 marks]

Answer ANY TWO questions in this section.

B1.

[30 marks]

Answer the following questions, based on the table below. Table name is STUDENT.

Student_ID	Student_Name	Subject_ID	Enrol_Date	Mark
9400074	Jason	CS1200	12-DEC-2008	90
9200020	Thomas	MA4545	05-SEP-2008	65
9875620	Leslie	CS1200	29-JUL-2007	48
8745520	Ben	CS8794	19-AUG-2008	69
9841220	Wendy	MA1235	15-AUG-2007	85

- (a) List the student name and their ID of the students who joined in year 2008. [6]
- (b) Write the SELECT statement to display the student name, and Subject ID for the students who enrolled during Aug 2007 to Aug 2008. You have to use the BETWEEN...AND operator. [7]
- (c) Write the SELECT statement to find out who scored higher marks than Wendy from the Student table. The output will display the Student name and their Mark. You have to use Sub query. [9]
- (d) List TWO examples of a Data Manipulation Language (DML) and TWO examples of Data Control Language (DCL) statement. [4]

STRICTLY CONFIDENTIAL
CDB101 - June 2013 - QP

- (e) Write SQL statements for the following questions using the table provided.

STUDENT

Sname	Sid	Module_Code
Sameer	1005	IT205
Timothy	1006	IT205
Daisy	1007	IT211
Ray	1012	IT211
Noor	1018	IT205

CLASSES

Module_Code	Module_Name	Lecturer
IT205	Multimedia	Catherine
IT206	Web Publishing	Carol
IT211	SQL	Shania

To display the student names and module code taught by Catherine.

[4]

STRICTLY CONFIDENTIAL
CDB101 - June 2013 - QP

B2.

[30 marks]

Answer the questions (a) and (b) based on the tables below:

SUBJECT

Subject_ID	Subject_Name	Department
CS1200	Information Systems	Computer Science
MA4545	The Diversity of Life	Botany
CS1300	Intro to Computing	Computer Science
CS8794	Intro to Chemistry	Chemistry
MA1235	Pure Mathematics	Mathematics

SCORE

Student_ID	Subject_ID	Mark
9400074	CS1200	90
9200020	MA4545	65
9875620	CS1200	48
8745520	CS8794	89
9841220	MA1235	85

- (a) Display all the subject name and department from the Subject Table. Concatenate both columns to become a single column and rename the header as Subject-Department. You need to add some literals. See example below. [8]

Subject-Department

Information Systems subject belongs to Computer Science.

The Diversity of Life subject belongs to Computer Science.

....

...

- (b) Write the SELECT statement to join the table SUBJECT and SCORE using EquiJoin. Display the columns Student ID, Subject Name and their Marks. [8]

STRICTLY CONFIDENTIAL
CDB101 - June 2013 - QP

- (c) Explain the meaning of Cartesian Product. [2]
- (d) How many rows will be produced in the following case if Table A and Table B are joined without a condition, or a WHERE clause? [2]

Table A has 4 row, Table B has 40 row

- (e) List and explain the Capabilities of SQL select statements. [6]
- (f) Explain the objectives of 'ORDER BY' clause. [4]

B3.

[30 marks]

- (a) Write a SQL statement that displays the result of the calculation 'add 5 to 219 and multiply the result by 15'. [3]
- (b) Explain what happens when the following query is executed. [6]

```
SELECT ENAME  
FROM EMP  
WHERE SAL BETWEEN [low] and [high];
```

- (c) Write a statement to show the number of employees for each department in the table below. [5]

EMPLOYEE

EMPID	ENAME	DEPTNO
E001	KEANU	D01
E010	JULIA	D02
E015	JANN	D03
E130	MANI	D01

STRICTLY CONFIDENTIAL
CDB101 - June 2013 - QP

- (d) Answer the following question, based on the table below. The table name is BEVERAGE.

ID	NAME	PRICE
B01	MILO	1
B02	NESCAFE	0.8
B03	ORANGE JUICE	2.5

Write the statement to display the 'Name' and the 'Price' of all drinks from the BEVERAGE table. The price column should be display in this format \$2.50. [9]

Sample Output:

NAME	PRICE \$
ORANGE JUICE	\$2.50

- (e) State THREE characteristics of a primary key. [3]
- (f) Write a select statement to retrieve all information from the table CLIENT for rows where values from the Cname column must start with 'Ke'. [4]

-END OF PAPER-