

Section A

[40 marks]

Answer ALL questions in this section.

A1. State the correct keyword or symbol for the following statements. [8]

- (a) Concatenate two columns to become one.
- (b) Eliminating duplicate values in a table.
- (c) Retrieve null values in a table.
- (d) Convert a number or character string to a date data type.
- (e) Provide the SQL command for list data in specific order
- (f) Provide the keyword for sorting data in ascending order
- (g) Provide the keyword for sorting data in descending order
- (h) What is the default sort order in SQL.

A2. State whether each of the following statements are either TRUE or FALSE. [10]

- (a) The WHERE clause is used to restrict the rows returned from the query.
- (b) Pound signs have to be used when comparing date values.
- (c) Logical operator is used when you want to include multiple conditions in a WHERE clause.
- (d) The Len function returns the length of a string. It will also calculate the space in the string.

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- (e) Default format for Date in Access is MM/D/YYYY
- (f) CStr is to convert a number or character string to a date datatype.
- (g) Count(*) function returns the number of non-null rows in the columns identified by expression.
- (h) Non-equijoin is use to combine records from two tables whenever there are matching columns from two tables.
- (i) Weekday(date) function extracts the month from a date.
- (j) In sub query, the outer query will be executed first.

- A3.** Define relational database and describe its structure. [4]
- A4.** Write a SQL statement to display today's date and change the header to TODAY from a table TEST. [3]
- A5.** List FIVE examples of a Data Definition Language (DDL) statement. [5]
- A6.** Write a SELECT statement to display the employee name (ename) and department number (deptno) stored in a table called (emptab). Sort the output in ascending order of salary (sal). [4]

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A7. Show the output after the manipulation from the following single-row functions. [4]

(a) Round(9.455,1)

(b) Round(27.432, 0)

(c) Mod(155,3)

(d) Mid ('Dip Computer Studies ', 5,8)

A8. List TWO operators that used in a single-row subqueries. [2]

Section B

[60 marks]

Answer ANY TWO questions in this section.

B1.

[30 marks]

Answer the question (a) based on the table below. The table name is PRODUCT.

Product ID	Product Name	Unit Price
1010	Basketball	4.95
1020	Football	5.65
1030	Soccer ball	12.95
1040	Volleyball	3.25
1050	Golf balls	

- (a) (i) Write an SQL statement to display the number of records in the PRODUCT table. [3]
- (ii) Write the SELECT statement to convert the null value of the UnitPrice column to 'Not available'. [4]
- (b) Define single row function. List FOUR types of single row functions. [5]
- (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 FOUR data types supported by Access. [4]
- (e) List FIVE examples of a Data Definition Language (DDL) statement. [5]

B2.

[30 marks]

- (a) Write the SELECT statement to join the table SUBJECT and SCORE using EquiJoin.
Display the columns Student ID, Subject Name and their Marks. [8]
- (b) Explain the meaning of Cartesian Product. [2]
- (c) 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 rows, Table B has 40 rows
- (d) List and explain any THREE Capabilities of SQL select statements. [6]
- (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'. [6]
- (g) Write a SQL statement that displays the result of the calculation 'add 5 to 219 and multiply the result by 15'. [3]

B3.

[30 marks]

Answer the following question, based on the table below. The table name is EMPLOYEE.

Last_Name	First_Name	Emp_ID	Dept	Salary
Wong	Joe	AC54	Accounts	3000
Cheng	Mary	AC72	Accounts	2800
Lee	Henry	OP05	Operations	1800
Hui	Ken	SL23	Sales	4000
Kwok	Jack	SL132	Sales	4000
Tam	Winnie	SL58	Sales	3500
Yu	Yu	OP46	Operations	2500
Hung	Patrick	OP29	Operations	2000

- (a) Write a SELECT statement to display the average, total, minimum and maximum salary (salary) stored in a table called employee (employee). [9]
- (b) Write the SQL statement to concatenate the three columns (Last_name, First_name and Dept) and add the literals "works in" and "Department" to produce the sample output as shown below. Display the heading as "Employee's department". [8]

The sample output:

Employee's department

Wong Joe works in Accounts department

Hui Ken works in Sales department

Lee Henry works in Operations department

- (c) Display all the information of employees whose salaries are less than 3000. [4]

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- (d) Write a SQL statement that displays the department and ID of all employees whose department is either 'Sales' or 'Operations'. [6]
- (e) State THREE features for a 'Primary key'. [3]

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