

Section A

[40 marks]

Answer ALL questions in this section.

A1. State whether the following statements are TRUE or FALSE. [15]

- (a) A primary key column can contain a null value
- (b) A foreign key column can contain duplicate values
- (c) Column aliases can be used to sort the output in the ORDER BY clause in Access.
- (d) A relational database uses two-dimensional tables to store information
- (e) The IN operator is a single row comparison operator
- (f) A row is a record.
- (g) ORDER BY clause can be put anywhere in a SELECT statement.
- (h) ORDER BY clause is mandatory in a SELECT statement.
- (i) FROM clause is optional in a SELECT statement.
- (j) SELECT clause is mandatory in a SELECT statement.
- (k) GROUP BY clause is optional in a SELECT statement.
- (l) Date values must enclose with a pair of pound sign (#).
- (m) Number values must enclose with a pair of dash symbol (-).

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(n) Characters values must enclose with a pair of quote (').

(o) NULL values is a zero.

A2. Complete the OR truth table. [9]

OR	TRUE	FALSE	NULL
TRUE			
FALSE			
NULL			

A3. Write the SQL statements for the following question using the table provided

STUDENT

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

Display student names and id who are not taking IT205. [6]

A4. Expand the abbreviation of DML. [1]

A5. Write an SQL statement to display all student names, (S_Name) and id (S_ID), which do not have values for their coursework (C_Marks) from the table called Coursework. [4]

A6. Write an SQL statement to display the warranty date which is six months from the date of purchase (purchase_date). Using a table called Purchases. [5]

Section B

[60 marks]

Answer ANY TWO questions in this section.

B1.

[30 marks]

- (a) Identify the wildcard symbols used in the WHERE clause in Access based on the following explanations. [5]
- (i) Compare a string of characters of any length
 - (ii) Compare one character
 - (iii) Compare one digit (numeric character)
 - (iv) Compare any of this range of characters
 - (v) Compare any of this outside a range of characters
- (b) List four data types supported by Access. [4]
- (c) Write SQL statements to display the price column from price table in the format shown below. [6]
- Required output structure:*
- \$4,526.00
- (d) Write SQL statements to select member name (*mem_name*) from the *MEMBER* table and identity (*m_id*) from the *FEE* table where there is a match on the age field (*mem_age*) common to both tables. [6]
- (e) Write SQL statements to display hiredate in the following format “**12 of April, 2011**” from employee table. [5]
- (f) State the differences between equi join and self join. [4]

B2.

[30 marks]

(a) Explain the objective of 'ORDER BY' clause. [3]

(b) Write a select statement to arrange the column 'Total' start from the highest value from the table Product. Show all records. [4]

(c) (i) The following SELECT statement is a sub-query that used to retrieve the employee's name (Ename) with the lowest sales commission (S_comm) from the Employee table. There are four errors in the statement. Identify and explain why it is an error. [8]

```
Select ename  
From employee  
Where salary > (select lowest(S_comm)  
From employee;
```

(ii) Write the complete SELECT statement with the correction for those errors you had identified in part (i). [1]

(d) Explain the usage of this SELECT statement. [2]

```
SELECT *  
From Student  
Where StudId = [Enter a student id];
```

(e) Provides **eight** benefits of using database approach as compare to using the file-based system. [8]

(f) Identify the **four** types of Multiple-row functions. [4]

B3.

[30 marks]

- (a) Write the syntax to join data in column 1 and column 2 from the two tables called table 1 and table 2, respectively. [4]

- (b) Answer the following question, based on the table below. Table name is Employee.

ID	Empname	Salary	Department
456120	Mike Lim	2500	Accounting
456239	Jonathan Lee	4500	IT
222356	Christopher	3000	Production
321456	Jenny	2800	Accounting
741250	Deepa	4500	Production

Write the SQL statement to accomplish the following task.

- (i) Display employee department and their total salary using Group By clause. [6]
- (ii) Display the ID and Empname of employees who work in the same department as 'Christopher'. Use sub queries to illustrate this task. [8]
- (c) Give **five** examples of a DDL statement. [5]
- (d) List **three** SQL statements that found in DML. [3]
- (e) Write an SQL statement to display all student names, (S_Name) and id (S_ID), which do not have values for their coursework (C_Marks) from the table called Coursework. [4]

-END OF PAPER-