

SECTION A

[40 marks]

Answer ALL questions in this section.

- A1. List the **three** types of joins supported by Access. [3]
- A2. State the SELECT statement syntax for joining two tables using equijoin. [5]
- A3. 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) Calculate the length of a string.
 - (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 when DESC is not used?

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- A4. State whether each of the following is an example of an arithmetic, comparison or logical operator. If it is not an operator state none. [7]
- (a) < >
 - (b) LIKE
 - (c) AND
 - (d) +
 - (e) IN
 - (f) NOT
 - (g) OR
- A5. Define relational database and briefly explain the structure of relational database. [4]
- A6. Expand the following abbreviation and briefly explain its usage under the context of SQL. [4]
- (i) DDL
 - (ii) DCL
- A7. Write a SELECT statement to display the average, total, minimum and maximum of the studmarks column stored in a table called Class2B. [9]

SECTION B

[60 marks]

Answer ANY TWO questions in this section.

B1.

[30 marks]

- (a) Re-write the following statement using the IN operator. [4]

```
SELECT robotname
FROM robottable
WHERE robotname = 'R2D2'
OR robotname = 'C3PO';
```

- (b) Write a SQL SELECT statement to display the following output. Do not use any tables to store the text. [6]

Remarks

Ohhhh!!! Interesting

- (c) List the customer_number, first_name and customer_balance of all customers in the CUSTOMER table, after sorting by customer_balance in ascending order. [5]
- (d) Find the customer_number, first_name and available credit (av_credit) for all customers in the CUSTOMER table who have an available credit (av_credit) between 500 and 1000. [6]
- (e) Give five examples of a DDL statement. [5]
- (f) What is redundancy? [1]
- (g) Write an SQL statement to calculate the number of rows in the MEMBER table. [3]

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B2.

[30 marks]

- (a) Using the tables shown below, answer the following questions:

STUDENT

<i>STUID</i>	<i>STUNAME</i>	<i>MAJOR</i>	<i>CREDITS</i>
S1001	HARRY TAN	HISTORY	90
S1010	SENG LIM	ART	63
S1015	MARY WONG	MATH	42
S1002	SHIVA	MATH	36
S1020	ANN CHIN	CSC	15
S1013	D BECKHAM	MATH	9

CLASS

<i>COURSE#</i>	<i>FACID</i>	<i>SCHED</i>	<i>ROOM</i>
ART103A	F101	MWF9	H221
CSC201A	F105	TUTHF10	M110
MTH101B	F110	MTUTH9	H225
BST205A	F202	MWF11	H221
MTH103C	F110	MWF11	H225
CSC203A	F105	MTHF12	M110

ENROLL

<i>COURSE#</i>	<i>STUID</i>	<i>GRADE</i>
ART103A	S1001	A
CSC201A	S1020	B
CSC201A	S1002	F
ART103A	S1010	
ART103A	S1002	D
MTH101B	S1020	A
HST205A	S1001	C
MTH103C	S1010	
MTH103C	S1002	B

- (i) Create the table STUDENT using the information that is shown. (The format for credits is a 2-digit format.) [5]
- (ii) Find the students who got grade “F”. [4]

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- (iii) Show the result of the SQL statements:

```
SELECT ENROLL.COURSE#, STUNAME, MAJOR
FROM CLASS, ENROLL, STUDENT
WHERE FACID='F110'
AND CLASS.COURSE#=ENROLL.COURSE#
AND ENROLL.STUID = STUDENT.STUID;
```

[3]

- (b) Answer the following questions, based on the table below. The table name is AGENT.

AgentID	AgentName	No_of_client
A01	JANET	5
A02	THOMAS	10
A03	SAMANTHA	7
A04	CHRISTINE	3
A05	MAY	6

Write the SQL statements to accomplish the following tasks.

- (i) Display all records from the Agent table. [2]
- (ii) Display the AgentID and AgentName for all Agents with more than 5 clients. [5]
- (c) State **four** data types use in Access. [4]
- (d) What is redundancy? What are the problems associated with redundancy? [3]
- (e) Define the terms:
- (i) Logical data independence [2]
- (ii) Physical data independence. [2]

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B3.

[30 marks]

Answer the following question, based on the table below. Table name is Member.

ID	Membername	Branch	Mem_fees	Joindate
10101	Mike	Boonlay	150	15-JAN-2006
10102	Jason	Jurong	200	20-FEB-2007
10104	May	Pasir Ris	400	19-JUL-2008
10106	Florence	Jurong	300	14-SEPT-2008

- (a) Write the SQL statement to accomplish the following task.
- (i) Display Branch and their total member fees. The result need to be grouped by branch. [6]
 - (ii) Display the ID and Membername of members that have the same branch as “Jason”. Use subqueries to complete this task. [9]
 - (iii) Write an SQL statement to display all Membernames that start with the letter ‘M’ from Member table. Label the Membername column as “Member name start as M”. [6]
- (b) List **five** advantages of using databases. [5]
- (c) Define the term Database Administrators [4]

-END OF PAPER-