

SECTION A

[40 Marks]

Answer ALL questions in this section.

A1. For each of the following statements, indicate whether it is **TRUE** or **FALSE**. [10]

- (a) The DISTINCT keyword is used to return only distinct (different) values.
- (b) A Foreign key is a unique column.
- (c) Relational database uses one-dimensional table to store information.
- (d) You can order by a column that you have not selected.
- (e) The default sort order is descending.
- (f) Single-row functions work on many rows to produce a single result.
- (g) Single-row function can be used at SELECT, WHERE and ORDER BY clause.
- (h) Group functions include nulls in calculations.
- (i) Group functions work across many rows to produce one result.
- (j) You cannot use group functions, if you did not include a GROUP BY clause.

A2. Illustrate the syntax in SQL of Create View. [3]

Please turn over

- A3. Complete the following statements by writing the most appropriate word in your answer booklet. [12]

SELECT	SAVEPOINT	UPDATE
GRANT	DROP	CREATE
COMMIT	TRUNCATE	DELETE
ROLLBACK	INSERT	REVOKE

- (a) _____ is Data retrieval language (DRL).
- (b) _____, _____, _____ are Data manipulation language (DML).
- (c) _____, _____, _____ are Data definition language (DDL).
- (d) _____, _____ are Data control language (DCL).
- (e) _____, _____, _____ are Transaction control.

- A4. List five SQL scalar functions which return a single value, based on the input value. [5]

Please turn over

A5. Answer the following question based on the table below.

TOY

Toy ID	Toy Name	Quantity	Price
T001	Pokemon	8	15
T002	Teddy Bear	5	10
T003	Barbie	10	20

Write a select statement to display all information about the toys that the quantity is more than 5 and price is not higher than 12 dollars. [6]

A6. List the types of JOIN you can use, and the differences between them. [4]

Please turn over

SECTION B

[60 Marks]

Answer ANY TWO questions in this section.

B1.

[30 Marks]

(a)

(i) State two features for a 'Primary key'. [2]

(ii) Based on the table below, which field is best to be chosen as a Primary key. Explain your answer. [2]

Product ID	Product Name	Price
P001	Kitchen Table	\$599
P002	Coffee Table	\$199

(b) Provide eight benefits of using Database Approach as compare to using file processing approach. [8]

(c) Answer the following question based on the table below.

MOVIE

Movie ID	Movie Name	M Date	M Time
M11	Mission Impossible	12-Jun-06	23:00
M14	Harry Potter	14-Jun-06	14:00

Please turn over

- (i) Write the SELECT statement to concatenate the columns *MovieName*, *MDate* and *MTime*. Rename the column aliases as **Movie's Information**. [10]

Sample Output:

Movie's Information

Mission Impossible will be shown on 12-Jun-06 at 23:00.

- (ii) Show the Access function and argument that will change the *MDate* column from the MOVIE table to display in this format '**12 of June 2009, Monday**'.

Note: You do not need to write the complete SELECT statement. [8]

Please turn over

B2.

[30 Marks]

(a)

- (i) Define 'Joins'. [1]
- (ii) How many join conditions is needed to join three tables? [1]
- (iii) Write the SELECT statement to join the table EMPLOYEE and DEPT. Display the columns Ename and DeptName. The common column for both tables is the DeptNo. [9]

(b)

- (i) Drinks that are less than a dollar will be increased in price by 0.10 cents. Write a statement to display the name, current price and new price of those drinks. [7]

Sample Output:

Beverage

NAME	PRICE	NEW PRICE
NESCAFE	0.8	0.9

- (ii) Write a statement to show the highest drink price. [3]

Please turn over

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

Product

Product Id	Brand Name	Quantity
TV101	Toshiba	5
TV002	Sony	12
TV400	Philips	15
TV851	Samsung	2
TV006	Sharp	11

Write the SQL statements to accomplish the following tasks.

- (i) Display the Product ID and Brand Name for all that have a quantity greater than 10. [4]
- (ii) Illustrate using DDL to create the above product table. [4]
- (iii) Show how to delete the above product table from the database. [1]

Please turn over

B3.

[30 Marks]

(a)

STUDENT

Student_ID	Student_Name	Address	Tutor
9400074	JASON	9, Ozie Hall	9554321
9200020	TEDDY	90, Second Hall	9400074
9875620	LESIE	87, River Road	Null
8745520	BEN	79, Main Street	9784585
9841220	WENDY	124, Long Hall	9554321

ENROMENT

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

SUBJECT

Subject_ID	Subject_Name	Department
CS1200	Information Systems	Computer Science
MA4545	The Diversity of Life	Botany
CS1300	Intro to Computing	Computer Science
CH8794	Intro of Chemistry	Chemistry
MA1235	Pure Mathematics	Mathematics

Using these tables, write SQL statements for the following:

- (i) Display a list of names of all subjects offered by the Computer Science department.

[4]

Please turn over

- (ii) Display a list of names of all students in alphabetical order. [3]
 - (iii) Calculate the average mark so far. [2]
 - (iv) Calculate the number of students. [2]
 - (v) Find the subject ids of subjects that a pass rate of 100%.
(Assume that the pass mark is 50) [6]
- (b) Write an SQL statement to display the average, total, minimum and maximum marks
(*studmarks*) stored in a table called *classt*. [9]
- (c) Provide four characteristics that distinguish the database approach with the file-based
approach. [4]

-END OF PAPER-