

2010_April

A1. State whether each of the following statements is True or False.

- (i) An SQL statement cannot be abbreviated. True
- (ii) The SELECT clause is mandatory in a SELECT statement. True
- (iii) The WHERE clause is optional in a SELECT statement. True
- (iv) The AS keyword must be included when aliasing a column name. True
- (v) The ORDER BY statement can be put anywhere in the SELECT statement. False
- (vi) NOT is a comparison operator. False
- (vii) The format function can only be used to manipulate a string. False
- (viii) An arithmetic expression cannot be written in the SELECT clause. False
- (ix) You can order by a column that you have not selected. True
- (x) Date must be enclosed with a quote when comparing the values. True

A2. Write the SQL statements for each of the following questions based on the table below.

Furniture

ID	Description	Price
----	-------------	-------

1001	Sofa	1199
------	------	------

1002	Bed	3999
------	-----	------

1003	Dining Set	1999
------	------------	------

1004	TV cupboard	888
------	-------------	-----

1005	Table	555
------	-------	-----

(i) Display all contents from the Furniture table.

```
Select*
```

```
From furniture;
```

(ii) Write the command to display the price column in the format shown below. You do not need to write the SELECT statement.

```
Format(price, '$#,###.00');
```

A3. A select statement in SQL can have different clauses. List the different clauses used in a select statement in their correct order of use.

Select

From

Where

Group by

Order by

A4. Write an SQL statement to list all book titles (title) that exist in the table called Author, without duplication of title.

Select DISTINCT title

From author;

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.

Select S_Name,S_ID

FROM Coursework

WHERE C_Marks IS NULL;

Section-B

B1. (a) Write an SQL statement to display member_id, borrow_date and due_date from a table called Books_Borrowing as shown below. Due_date is calculated as 21 days after the borrow_date.

```
SELECT Member_id, Borrow_date, DateAdd(day,21,Borrow_date) As due_date  
FROM Books_Borrowing;
```

(b) Write an SQL statement to calculate the number of rows in the MEMBER table.

```
SELECT COUNT(*) As NumberOfRows  
FROM Books_Borrowing;
```

c) Identify the most appropriate group function name for the following tasks.

(i) To find the mean of the column values

AVG()

(ii) To total up the number of records in a table

COUNT()

(iii) To find the highest value in the column

MAX()

(iv) To add up all the values in a column

SUM()

d) The following table only consists of one column and one row. You are required to write the SQL statement.

(i) Display the weekday for the hiredate in the day of the week format (for example, 'Thursday'.)

SELECT Format(Hiredate, 'dddd') As Weekday

FROM Test;

(ii) Calculate number of months between today's date and the hiredate. Display the column heading as "Months Worked".

SELECT DateDiff(month,Hiredate,GetDate()) As [Months Worked]

FROM Test;

(e) List any five group functions in SQL.

AVG()

COUNT()

SUM()

MAX()

MIN()

B2.

a) Write and SQL statements for the following questions using the table provided.

(i) To display student names and id who are not taking IT205.

SELECT Sname, Sid

FROM STUDENT

```
WHERE Module_Code <> 'IT205';
```

(ii) To display the student names and subject code taught by Catherine.

```
SELECT S.Sname, C.Module_Code  
  
FROM STUDENT As S  
INNER JOIN CLASSES As C ON S.Module_Code=C.Module_Code  
  
WHERE C.Lecturer= 'Catherine';
```

b) Briefly explain the following terminology:

i) Column- A column is a set of data values one for each row of the table.

ii) Row- A record is composed of fields that contains the data about one particular item in a table.

iii) Table- A database table is composed of records which hold data about a particular subject.

iv) Field- A field is a part of a record and contains a single piece of data of the record.

c) Write an SQL statement to display the theatre name (name) and the cost of construction (cost) of the following theatres: TAKASHIMAYA, TANGLIN MALL, PARAGON and RAFFLES CITY from the construction table.

```
SELECT name, cost  
  
FROM Construction  
  
WHERE name IN ('TAKASHIMAYA', 'TANGLIN MALL', 'PARAGON',  
'RAFFLES CITY');
```

B3.

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

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

Ans-

```
Select robotname
From robottable
Where robotname IN ('R2D2' , 'C3PO');
```

(b) Write a SQL SELECT statement to display the following output. Do not use any tables to store the text. [4]

Remarks

Ohhhh!!! Interesting

Ans-

Select 'Ohhhh!!! Interesting' As Remarks;

(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.

```
Select customer_number, first_name, customer_balance
```

```
From CUSTOMER
```

```
Order by customer_balance;
```

(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.

```
select customer_number, first_name, av_credit
```

```
from CUSTOMER
```

```
Where av_credit between '500' and '1000';
```

e)

Write the SELECT statement to concatenate the columns MovieName, *MDate* and *MTime*. Rename the column aliases as **Movie's Information**.

Sample Output:

Movie's Information

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

Ans-

```
SELECT Concat([Movie Name], ' will be shown on ', [M Date], ' at ', [M Time], '.')
```

```
As [Movie's Information]
```

```
FROM MOVIE;
```

(f) State two features for a 'Primary key'.
the two features are:

- it has unique value.

- It cannot contain null value.