FINAL
Examination Paper

(COVER PAGE)

Session : August 2014

Programme : Diploma In Information And Communication Technology (DICTN)

Course : ICT1104 : Database Management

Date of Examination : December 5, 2014

Time : 8:00am – 10:00am  Reading Time: Nil

Duration : 2 Hours

Special Instructions :

Answer any FOUR (4) questions.

Materials permitted : Nil

Materials provided : Nil

Examiner(s) : Ms. Light Lau Teng Lye, Leong Siok Jen.

Moderator : Ms. Noor Hasrina

This paper consists of 4 printed pages, including the cover page.
This paper consists of SIX (6) questions. Answer any FOUR (4) questions in the answer booklet provided. All questions carry equal marks.

Question 1

(a) Briefly explain **Cardinality** and **Participation** in database relationship. (5 marks)

(b) Explain **FOUR (4)** components of the data hierarchy based on above diagram. For each component, provide an appropriate example based on the above diagram. (10 marks)

(c) Explain **FIVE (5)** types of Form Control in Microsoft Access. (10 marks)

Question 2

(a) Write SQL command that will create **Sales** table which have the following items: custID, custName, salesValue, dateSales as shown below.

<table>
<thead>
<tr>
<th>custID</th>
<th>custName</th>
<th>salesValue</th>
<th>dateSales</th>
</tr>
</thead>
</table>
| 20     | Johnny   | 4,000      | 25/10/2010   | (5 marks)
(b) Write SQL command to insert the following information into question 2(a) table: customer ID = 38, customer name = Peter, date sales = 11th December 2014, sales value = $5,000. (5 marks)

(c) Write SQL command to give Cindy 20% discount per month. (5 marks)

(d) Write SQL command to update Sam record as follows: customer ID = 37 and date sales = 20th October 2010. (5 marks)

(e) Write SQL command to remove Peter’s record. (5 marks)

Question 3

(a) Differentiate between Primary Key and Foreign Key in Entity Relationship Diagram. (5 marks)

(b) Identify and explain FIVE (5) users who are using Database Management Systems. (15 marks)

(c) With an aid of diagram, define what is Recursive Relationship. (5 marks)

Question 4

(a) List FIVE (5) business applications that use Database in our daily life. (5 marks)

(b) Explain FIVE (5) data types used in attributes structure. Provide appropriate example for each data types. (10 marks)

(c) The following attributes have been identified in a database:
   - AssignmentName
   - StudentID
   - AssignmentGrade
   - StudentName
   - SubjectCode
   - AssignmentCode
   - SubjectName
   - Gender
   - Birthday

   Draw the Entity Relationship (ER) diagram based on the above information.
Question 5

(a) The table above represent local excursion packages that customer can book from the staff from the company. Normalize the above UNF table to 3NF.

(b) Discuss the FIVE (5) components of a database system?

Question 6

(a) Question 6 (a) is to be based on the following SQL command:

```sql
SELECT branch_no, branch_postcode, branch_city;
FROM Branch
WHERE branch_city = Georgetwon OR branch_postcode = '11900'
ORDER BY branch_name;
```

Identify and correct FIVE (5) mistakes from the above SQL command.

(b) Question 6 (b) is to be based on the following SQL command:

```sql
SELECT branchLocation, COUNTER(staffNo), SUM(salary) AS total
FROM Staff
ORDER BY branchLocation;
```

Identify and correct FIVE (5) mistakes of the above SQL command in order to produce the output as appeared in the query table:

<table>
<thead>
<tr>
<th>branchLocation</th>
<th>count</th>
<th>sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarawak</td>
<td>34</td>
<td>2100</td>
</tr>
<tr>
<td>Melaka</td>
<td>4</td>
<td>5172</td>
</tr>
<tr>
<td>Johor</td>
<td>122</td>
<td>4187</td>
</tr>
</tbody>
</table>

(c) What is the difference between SQL commands ANY and ALL?