



FINAL
Examination Paper

(COVER PAGE)

Session : August 2012

Programme : Diploma In Information And Communication Technology (DICTN)

Course : ICT1104 : Database Management

Date of Examination : December 13, 2012

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

Duration : 2 Hours

Special Instructions :

Answer any FOUR (4) questions.

Materials permitted : _____
Nil

Materials provided : _____
Nil

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

Moderator : Dr. Vincent Khoo Kay Teong

This paper consists of 4 printed pages, including the cover page.

INTI INTERNATIONAL COLLEGE SUBANG
INTI INTERNATIONAL COLLEGE PENANG

DIPLOMA IN COMPUTING & INFORMATION TECHNOLOGY PROGRAMME
ICT 1104: DATABASE MANAGEMENT
FINAL EXAMINATION: AUGUST 2012 SESSION

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 the following terms :-
- i) default value
 - ii) functional dependency
 - iii) tuple
 - iv) combo box
- (10 marks)
- (b) Identify and explain **THREE (3)** functions of Database Management Systems (DBMS).
(6 marks)
- (c) Name the **EIGHT (8)** stages of the Database Application Lifecycle in correct order.
(9 marks)

Question 2

- (a) Provide any **THREE (3)** examples of Database Management System software.
(3 marks)
- (b) With the aid of a diagram, identify and explain **THREE (3)** levels of ANSI-SPRAC architecture of database.
(12 marks)
- (c) Identify and explain **FIVE (5)** components of Database Management Systems environment.
(10 marks)

Question 3

- (a) Differentiate between Referential Integrity and Entity Integrity in database design. (6 marks)
- (b) Discuss any **THREE (3)** roles of people/personnel involved in the database environment. (9 marks)
- (c) Briefly explain **FIVE (5)** types of aggregate functions in MS Access. (10 marks)

Question 4

- (a) Based on the table below, perform the normalization process to convert the table from First Normalization Form into Third Normalization Form (3NF). Show all the steps involved in the normalization process.

CustomerPayment

payMethod	doctorName	medicineNo	payAmount	medicineName	doctorType
patientNo	doctorNo	patientName			

(15 marks)

- (b) Identify and explain **FIVE (5)** Microsoft Access components in Report structure. (10 marks)

Question 5

- (a) Given the following descriptions, create an appropriate Entity Relationship diagram and relational model for each of the specified relationships.
- Each doctor treats one or more patients and each patient is treated by one doctor.
 - Each of the patients may not have any medicine or may have one or more medicines and each medicine belongs to one patient.
- (12 marks)
- (b) Explain ANY SIX (6) properties of a good relation. (9 marks)
- (c) Differentiate between action queries and update queries. (4 marks)

Question 6

Client(client_id, name, address, age, tel_no, date_enrol)
 Treatment(trt_code, description, trt_price)

write SQL statements for the following based on the tables above:-

- i) Display all treatment descriptions that price between \$200 and \$300 who have accumulated between 30 and 35 credit hours inclusive. (4 marks)
- ii) Delete the name Terry Lim from the client table. (3 marks)
- iii) Insert a new client information into the client table. (3 marks)

Based on the same table above, define the query for the following request in design grid form (Query Design View) for question, (iv), (v) and (vi).

- iv) List out the client name and client id where the client name starts with Y (5 marks)
- v) Create a parameter query to update all the treatment of clients by 10 %, based on the treatment code entered. (5 marks)
- vi) List out all the client id sorted according to descending order with the enrol date between 1/01/2012 and 3/06/2012. (5 marks)

-The End-