

FINAL
Examination Paper

(COVER PAGE)

Session : AUGUST 2017

Programme : Diploma In Information And Communication Technology (DICTN)

Course : ICT1104: Database Management

Date of Examination : 14 December, 2017 (Thursday)

Time : 2:00 pm – 4:00 pm Reading Time : Nil

Duration : 2 Hours

Special Instructions :

Section A: Answer All question in OMR sheets.

Section B: Answer **Three (3)** question in the answer booklet provided.

IMPORTANT NOTE: THIS PAPER SHOULD NOT BE TAKEN OUT OF THE EXAMINATION HALL

Materials permitted

:

Nil

Materials provided

:

OMR SHEETS

Examiner(s)

:

Light Lau Teng Lye and Melisa Kaur

Moderator

:

Ms. Noor Hasrina

This paper consists of 7 printed pages, including the cover page

DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY PROGRAMME
(DICTN)

ICT 1104: DATABASE MANAGEMENT
FINAL EXAMINATION: AUGUST 2017 SESSION

Section A: Answer **ALL** questions.

- 1 _____ is the result of revealing the meaning of raw facts.
 - A. Information
 - B. Database
 - C. Database Management System
 - D. None of the above

- 2 Which of the following are factors that cause DBMS compare to with file base system?
 - A. Datasets increasing in diversity and volume.
 - B. Easy to manage large volume of data.
 - C. Save cost (paperless).
 - D. All of the above

- 3 _____ contains the commands used to create and destroy databases and database objects.
 - A. Data Definition Language
 - B. Data Manipulation Language
 - C. Both (A) and (B)
 - D. None of the above

- 4 Which of the following are the limitations of file base system?
 - A. Separation and isolation of data
 - B. Duplication of data
 - C. Data dependence
 - D. All of the above

- 5 _____ exists when different versions of the same data appear in different places.
 - A. Data inconsistency
 - B. Poor data security
 - C. Structural dependence
 - D. Conceptual dependence

- 6 _____ refers to a set of meaningful associations among entity types
- A. Entity
 - B. Relationship
 - C. Attribute
 - D. Property
- 7 _____ refers to attribute composed of multiple components, each with an independent existence.
- A. Composite Attribute
 - B. Simple Attribute
 - C. Strong entity
 - D. Weak entity
- 8 _____ refers to candidate key selected to uniquely (attribute) identify each occurrence of an entity type.
- A. Foreign Key
 - B. Secondary Key
 - C. Primary Key
 - D. Public Key
- 9 _____ describes maximum number of possible relationship occurrences for an entity participating in a given relationship type.
- A. Attribute
 - B. Relationship
 - C. Participation
 - D. Cardinality
- 10 Which of the following are the types of update anomalies?
- A. Insertion
 - B. Deletion
 - C. Modification
 - D. All of the above
- 11 A _____ is a logically connected set of one or more fields that describes a person, place, or thing.
- A. Database
 - B. Column
 - C. File
 - D. Record

- 12 _____ control provides a list of values or choices for user to select.
- A. List box
 - B. Text box
 - C. Button
 - D. All of the above
- 13 _____ control provides a text field for user to key or enter in the alphanumeric data and display text to user.
- A. List box
 - B. Text box
 - C. Button
 - D. All of the above
- 14 In SQL, all _____ data must not be enclosed in quotes.
- A. non-numeric
 - B. numeric
 - C. Both (A) and (B)
 - D. None of the above
- 15 _____ refers to SQL command that specifies table(s) in database to be used.
- A. Select
 - B. From
 - C. Where
 - D. All of the above
- 16 _____ refers to SQL command that specifies which columns to appear in output
- A. Select
 - B. From
 - C. Where
 - D. All of the above
- 17 The _____ model was developed to allow designers to use a graphical tool to examine structures rather than describing them with text.
- A. hierarchical
 - B. object-oriented
 - C. entity relationship
 - D. network

- 18 _____ refers to SQL command that eliminate duplicates data.
- A. Group By
 - B. Having
 - C. Distinct
 - D. As
- 19 In SQL _____ returns total values in specified column.
- A. SUM
 - B. COUNT
 - C. MAX
 - D. AVG
- 20 Which of the following functions are allowed in Query By Example (QBE)?
- A. Select records according to some criteria.
 - B. Perform calculations on the data in tables.
 - C. Insert and delete records.
 - D. All of the above

Section B: Answer **ALL** questions.

1.

Pet_id	Pet_name	Pet_type	Pet_age	owner	ownerNo	date	Med_code	Medicine
246	rover	dog	12	Sam Cook	B112	Jan 13/2017	01	Rabies vaccination
						Mar 27/2002	10	Treat wound
						Apr 02/2002	05	Heart worm test
298	spot	dog	2	Terry Kim	A224	Jan 21/2002	08	Tetanus vaccination
						Mar 10/2002	05	Heart worm test
519	tweedy	bird	2	Sam Cook	B112	Apr 30/2002	20	Annual check up
						Apr 29/2002	12	Eye wash

a) Normalize the above table into **THIRD** Normalized Form (3NF). (15 marks)

b) List **FIVE (5)** sections of a report in MS Access. (5 marks)

2. Customer

cust_id	cust_name	cust_post	cust_annual_installment
b1	Anne	31900	\$10000
b4	Banny	30660	\$16000
c13	Casey	31001	\$15000
c21	Dan	31900	\$12000

Model

model_code	model_name	model_price	model_type	cust_id
NK8210	Lanova	\$1500	Processor	c13
MD3310	Somsong	\$200	Antenna	b1
MK3210	Mokia	\$350	Speaker	c13
MN9910	Sani	\$2500	Processor	c21

Based on the visualization, write the SQL or QBE statements and produce the queries tables for the following:

a) Display number of models available in the computer store. (5 marks)

- b) Display the model name(s) purchased by customer named Casey. (5 marks)
- c) List the model name and their codes which are categorized as Processor and Antenna. (5 marks)
- d) Produce a list of the most expensive, the cheapest and the average prices of the computer components. (5 marks)
- 3 a) Suppose you are involved in developing a database system for the restaurant of ABC company. The operation of the restaurant can be described as follows.

They have a file of food that they provide to their customers. Each type of food has a unique table code, table descriptions, as well as, type, quantity and a price.

They have a file of customers. Each customer is given a unique customer number. This file also contains customer names, and customer addresses.

A customer may make zero, one or more bookings at a time, and a booking is always made by one customer alone. Booking table consists of date due, the date start, quantity and the status.

A booking may involve one or more than one table, and a table may be involved in more than one booking.

Given this information, draw an ER diagram for this restaurant. Identify and label the primary key(s) of each entity, relationships and the foreign keys required for creating the relational model.

(20 marks)

~The End~

