

 **INTI** International
University & Colleges

FINAL
Examination Paper

(COVER PAGE)

Session : AUGUST 2018

Programme : Diploma In Information And Communication Technology (DICTN)
Diploma In Information Technology (DITN)

Course : ICT1104: Database Management

Date of Examination : 8 December 2018, (Saturday)

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

Duration : 2 Hours

Special Instructions :

SECTION A: Answer **All** questions

SECTION B: Answer **THREE (3)** questions

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

Materials permitted

: Nil

Materials provided

: OMR Sheets

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Moderator : Noor Hasrina

This paper consists of 8 printed pages, including the cover page

DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY (DICTN)
DIPLOMA IN INFORMATION TECHNOLOGY (DITN)
ICT1104: DATABASE MANAGEMENT
FINAL EXAMINATION: AUGUST 2018 SESSION

Section A (40 marks)

Instruction: This section consists of **twenty (20)** questions. Answer **ALL** questions in the OMR sheets provided.

1. In database environment, _____ is the result of revealing the meaning of raw facts.
 - A) Information
 - B) End-user data
 - C) Encrypted data
 - D) Encoded sample

2. In a database, _____ made up of record.
 - A) records
 - B) fields
 - C) articles
 - D) names

3. In database environment, _____ provide a description of the data characteristics and the set of relationships that link the data found within the database.
 - A) Queries
 - B) Metadata
 - C) Schemas
 - D) End-user data

4. Which of the following are the limitations of file base system?
 - A) Separation and isolation of data
 - B) Duplication of data
 - C) Data consistency
 - D) Both (A) and (B)

5. Which of the following are the advantages of Database Management System (DBMS)?
 - A) Data sharing
 - B) Enforcement of standard
 - C) Both (A) and (B)
 - D) None of the above

6. In database environment, _____ cause unauthorized or unintended activity or misuse by authorized database users.
- A) data inconsistency
 - B) conceptual dependence
 - C) structural dependence
 - D) poor data security
7. Data _____ is defined as the condition in which all of the data in the database are consistent with the real-world events and conditions.
- A) anomaly
 - B) integrity
 - C) ubiquity
 - D) quality
8. Which of the following refers to the situation where different versions of the same data are stored at different places because they weren't updated consistently?
- A) Data redundancy
 - B) Data query
 - C) Data dictionary
 - D) Data integrity
9. The term _____ refers to an organization of components that define and regulate the collection, storage, management and use of data within a database environment.
- A) structured data
 - B) transaction
 - C) database system
 - D) management system
10. Which of the following are the types of update anomalies?
- A) Selection
 - B) Deletion
 - C) Modification
 - D) Both (B) and (C)
11. From a database point of view, the collection of data becomes meaningful only when it reflects properly defined business _____.
- A) plans
 - B) goals
 - C) norms
 - D) rules

12. In form design, _____ control provides an area for user to enter data via keyboard.
- A) list box
 - B) text box
 - C) button
 - D) All of the above
13. In form design, _____ control allow user to select an option from a drop-down list.
- A) list box
 - B) combo box
 - C) button
 - D) All of the above
14. In SQL, all _____ data must be enclosed in quotes.
- A) text
 - B) numeric
 - C) Both (A) and (B)
 - D) None of the above
15. In a library catalogue database, each record represents:
- A) one book, journal, video, CD, etc.
 - B) one author
 - C) one subject
 - D) All of the above
16. In SQL, _____ refers to SQL command that filters groups subject to some condition.
- A) Group By
 - B) From
 - C) Where
 - D) All of the above
17. In Big Data environment, _____ refers to the many sources and types of data.
- A) Volume
 - B) Velocity
 - C) Variety
 - D) Veracity
18. Which of the following is refers to the amount of data been store in Big Data characteristics.
- A) Volume
 - B) Velocity
 - C) Variety
 - D) Veracity

19. In Big Data environment, characteristics that refers to the trustworthiness of the data is called _____.
- A) Volume
 - B) Velocity
 - C) Variety
 - D) Veracity
20. Which of the following Big Data characteristics refers to the frequency of incoming data that needs to be processed.
- A) Volume
 - B) Velocity
 - C) Variety
 - D) Veracity

Section B (60 marks)

Instruction: Answer any **THREE** out of **FOUR** questions in the answer booklet provided.

1. a) Explain what is meant by DBMS and provide **THREE (3)** examples of DBMS. (5 marks)
 - b) List any **FIVE (5)** functions of DBMS. (5 marks)
 - c) Briefly describe **FOUR (4)** people/personnel involved in the database environment. (10 marks)
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2. Staff

Staff id	Staff name	Staff post	Staff pay
1	Amy	11900	\$1000
4	Ben	10660	\$1600
13	Candy	21001	\$1500
21	Dennis	11900	\$1200

Food

Food code	Food name	Food price	Food type	Staff id
MC100	Burger	\$15	Main Dish	13
MD300	Pizza	\$20	Main Dish	1
MK222	Salad	\$35	Starter	13
MN555	Cake	\$25	Dessert	21

Based on the restaurant database, write the SQL statements and produce the queries tables for the following:-

- a) Display numbers of food available in the restaurant. (5 marks)
- b) Display the food name(s) sold by staff named Candy. (5 marks)
- c) Explain what is Data Warehouse? (3 marks)
- d) Explain the term Big Data. (2 marks)
- e) List out **FIVE (5)** applications of Big Data. (5 marks)

- 3 Suppose you are involved in developing a database system for the Sales Department of ABC company. The operation of the department can be described as follows.

They have a file of products that they provide to their customers. Each type of product has a unique product number, product descriptions, as well as, a cost, 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 place zero, one or more orders at a time, and an order is always placed by one customer alone. Information as to orders includes the date due, the total price, quantity and the status.

An order may involve one or more than one type of products, and a type of products may be involved in more than one order.

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

(20 marks)

- 4 a)

Order Form			
Order number:	1234	Date:	11/04/98
Customer number:	9876		
Customer name:	Billy		
Customer address:	456 HighTower Street		
City-Country:	Hong Kong, China		
ProductNo	Description	Quantity	Unit Price
A123	Pencil	100	\$3.00
B234	Eraser	200	\$1.50
C345	Sharpener	5	\$8.00

Normalize the above table to 3NF.

(12 marks)

b) Explain the following Queries:

- i) Update query
- ii) Delete query
- iii) Append query
- iv) Make Table query

(8 marks)

~ The End ~

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