

**FINAL
ALTERNATIVE ASSESSMENT**

(COVER PAGE)

Session : August 2021

Programme : Diploma in Information Technology (DITN)
Diploma in Computer Science (DCS)

Course : ICT1104: Database Management

Date of Examination : 5 December 2021 (Sunday)

Time : 4.00pm – 6.30pm Reading Time : Nil

Duration : 2 Hours 30 Minutes

Special Instructions :

Answer ALL questions.

Material permitted : Non-Programmable Scientific Calculator

Materials provided : Nil

Examiner(s) : Light Lau Teng Lye, Mahaletchumy

Chief Moderator : Nuur Shuhada Mohd Najib

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

DIPLOMA IN INFORMATION TECHNOLOGY PROGRAMME (DITN)
DIPLOMA IN COMPUTER SCIENCE PROGRAMME (DCS)
ICT1104: DATABASE MANAGEMENT
FINAL ALTERNATIVE ASSESSMENT: AUGUST 2021 SESSION

Answer ALL questions.

- 1 Suppose you are involved in developing a database system for the ticket booking database of ABC bus company. The operation of the ticket booking can be described as follows.
- They have a file of booking that they provide to their clients. Each type of ticket has a unique ticket code, as well as, quantity available and a price.
 - They have a file of clients. Each client is given a unique client number. This file also contains client telephone, and client name. The client name consists of first name and last name.
 - A client may make zero, one or more bookings at a time, and a booking is always placed by one client only. Information as to booking includes the booking date, and quantity. The system is allowed to booking up to 5 bookings per day, bookings limit which is used to validate customer.
 - A booking may involve one or more than one tickets and a ticket may be involved in more than one booking.

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

(20 marks)

- 2 The insurance company ABC supervisor need some of the information in the Relational Database Management System (RDBMS) database. You as the database administrator is requested by the supervisor to explain **FIVE (5)** functions of RDBMS with **FIVE (5)** appropriate examples for each function.

(20 marks)

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OrderID	addresses	custID	custName	BookDate	ProdID	BookQty	Price	cost
1122	123 main st.	A10	John	10/2/16	Ip 6	10	2000	20000
					Sams 3	5	200	1000
1001	234 st gate	A20	Sam	11/4/16	ZTC 1	20	100	2000
2004	989 st mid	A22	Lau	22/5/16	HTC 9	2	2000	4000
					ZTC 1	2	100	200
					Sam 3	1	200	200

The above sales table is from Company XYZ. The company would to build the database to record the form information. You as the database administrator, normalize the above table from 1 Normal Form (1NF), 2NF and 3NF.

(30 marks)

4a) Write an SQL command that will create **Customer** table which shown in below.

Customer

custID	custName	payment	dateSales
20	Johnny	4,000	25/10/2010

(5 marks)

b) Write an SQL command to insert the following information into the Question 4(a) table: customer ID = 88, customer name = Mary, date of sales = 31th December 2019, payment = \$55,000.

(5 marks)

c) Write an SQL command to give Sandy 10% discount upon the payment.

(5 marks)

- d) Write an SQL command to update Samuel record as follows: customer ID = 77 and date sales = 24th October 2020. (5 marks)
- e) Write an SQL command to remove Peter's record. (5 marks)
- f) List out how many customers are available in this company. (5 marks)

~THE END~

ICT1104 (F)/ August 2021 Session/ formatted