

FINAL
Examination Paper

(COVER PAGE)

Session : April 2016

Programme : Diploma In Information And Communication Technology (DICTN)

Course : **ICT1104: Database Management**

Date of Examination : 25 July, 2016 (Monday)

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

Duration : 2 Hours

Special Instructions :

Answer any FIVE (5) questions.

Materials permitted : Nil

Materials provided : Nil

Examiner(s) : **Tang Yang Tze and Light Lau Teng Lye**

Moderator : Noor Hasrina

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

DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY (DICTN)
ICT1104: DATABASE MANAGEMENT
FINAL EXAMINATION: APRIL 2016 SESSION

Instructions: This paper consists of **SIX (6)** questions. Answer any **FIVE (5)** questions in the answer booklet provided. All questions carry equal marks.

Question 1

- (a) Define the term “data” and give **THREE (3)** examples. (5 marks)
- (b) A database system has **THREE (3)** basic components. Identify these components and explain their functions. (9 marks)
- (c) Explain the view mechanism of database system. Support your answer with a suitable example. (6 marks)

Question 2

- (a) Define UNF, 1NF and 2NF in normalization. (6 marks)
- (b) Given the following relation and functional dependencies, normalize the relation to third normal form (3NF). Explain your working steps.

R (p1, a1, p2, p3, p4, a2, a3, a4, a5, m1, m2, m3, m4, x1, x2, x3, x4, x5, x6)

fd1: p1 → p2, p3, p4

fd2: a1 → a2, a3, a4, a5

fd3: m1 → m2, m3, m4

fd4: x1 → x2, x3, x4, x5, x6

(14 marks)

Question 3

- (a) Explain the concept of “relationships” in Entity-Relationship (ER) model. (5 marks)

- (b) Convert the following relations into ER model. Specify the foreign keys.

Customers (Cno, name, IC, company, address, contact)

Orders (Ono, date, Cno, total, remarks)

Order_Product (Ono, Pcode, price, quantity, subtotal)

Products (Pcode, name, description, category, price)

Payments (Pno, date, Cno, amount, description, Ono)

(15 marks)

Question 4

- (a) Create a query (in Design view) based on the following table.

Training (refno, title, date, duration, venue, trainer, description, cost, type, status)

- (i) List the training records with the cost more than RM10000. (5 marks)

- (ii) List the titles of all trainings conducted on a random date (parameter query). (6 marks)

- (iii) List the trainer names and count the trainings done by each trainer. (6 marks)

- (b) Explain the SQL in Access database. (3 marks)

Question 5

- (a) List FIVE (5) data types that support multiple formats. (5 marks)

- (b) Explain how Input Mask, Default Value and Validation Rule properties can be used to assist users during data entry. (9 marks)

- (c) Differentiate between entity integrity rule and referential integrity rule. (6 marks)

Question 6

- (a) Explain the use of forms in Access database. (4 marks)
- (b) We can use buttons to perform many operations in a form. Identify and describe **FOUR (4)** categories of operations associated with buttons. (12 marks)
- (c) List **FOUR (4)** types of report layouts in Access database. (4 marks)

~ The End ~
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