

Higher National Diploma in Accountancy
Second Year, First Semester Examination — 2017
HNDA 2105-Database Management System and Data Analysis

Instructions for Candidates:
Answer five (5) questions only

No. of questions: 06
No. of pages: 03
Time : Three (3) hours

1. i. Give four (04) disadvantage of conventional file processing. [04 Marks]
ii. Define the following terms. [06 Marks]
 a) Database administrator.
 b) Database.
 c) Information.
iii. Write four (04) characteristics of Database Approach. [04 Marks]
iv. Briefly describe three (03) advantages of views in database. [06 Marks]
(TOTAL 20 Marks)
2. i. What is DBMS? List two (02) examples for DBMS. [04 Marks]
ii. Write four (04) advantages of DBMS. [04 Marks]
iii. Define the term RDBMS (Relational Database Management System) [02 Marks]
iv. Briefly explain the following terms with an example.
 a) Degree of a relation
 b) Cardinality
 c) Domain [06 Marks]
v. Write down four (04) properties of Relational model. [04 Marks]
(TOTAL 20 Marks)
3. i. Briefly explain the following terms.
 a) Entity
 b) Attributes
 c) Relationship [06 Marks]
ii. Describe three (03) database design processes. [06 Marks]
iii. Draw the ER Diagrams for the following scenarios and indicate cardinalities.

- a) Professors work for only one department and departments have many professors.
- b) A Student works on many projects and one project has many students.
- c) Every project is responsible for a particular department.

[06 Marks]

iv. Define the term multivalued attribute with a suitable example. [02 Marks]

(TOTAL 20 Marks)

4.

i. Briefly explain the MS access objects. [08 Marks]

ii. Write down the steps to create a table in MS access. [03 Marks]

iii. Write down the suitable MS access data type for the following fields.

- a. Employee name
- b. Employee number
- c. Gender
- d. Budget
- e. Project start

[05 Marks]

iv. What is the difference between validation rule and validation text? [04 Marks]

(TOTAL 20 Marks)

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5.

i. Define SQL. [03 Marks]

ii. Explain the role of Structured Query Language. [03 Marks]

iii. Write the SQL statements considering the following relations.

Student (Stu_No , Fname ,Lname,Address , Dept_No)

Department (Dept_No, DeptName , HOD_No)

a. Find out suitable primary keys for the above two (02) relations.

[02 Marks]

b. Retrieve the full details of students.

[02 Marks]

c. Retrieve the department number and first name of students whose last name is “Perera” and address is “Galle”.

[03 Marks]

d. Retrieve the student number and first name which belong to “Research” department (Department name). [04 Marks]

e. Retrieve the student number and first name whose first name is started from “D”

[03 Marks]

(TOTAL 20 Marks)

6.

i. What is SPSS? [03 Marks]

ii. Give three (03) statistical packages except SPSS. [03 Marks]

iii. Define the term target variable. [03 Marks]

iv. Consider the following table and answer the questions given below.

Student Number	Test1 Marks	Test2 Marks
001	50	30
002	50	70
003	65	70
004	80	90

a. How do you calculate new variable called Total? Write the steps.

Total = Test1 + Test2.

[05 Marks]

b. Write the steps to calculate mean, standard deviation, maximum and minimum of Test1.

[06 Marks]

(TOTAL 20 Marks)