



PAN AFRICA CHRISTIAN UNIVERSITY

(DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY)

END OF TERM EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: DICT 0133

CAMPUS: ROYSAMBU

COURSE TITLE: DATABASE MANAGEMENT

EXAM DATE: MONDAY, DATE (DDTH MONTH YEAR)

TIME: START HOUR – END 02:30-05 :30 HRS

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other THREE questions in Section **B**.
- None programmable calculators permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

SECTION A

(Answer ALL questions in this section)

SECTION A (10 Marks)

Question 1:

- a) Normalization is an essential process in databases. Discuss the benefits of normalization (6 Marks)
- b) Distinguish between data manipulation languages and transaction control languages as used in SQL (4 Marks)

SECTION B

(Answer any THREE (3) questions in this section)

Question 2:

Write SQL code that would create a table named **Employee Data** with the following properties (10 Marks)

Field Name	Size	Data Type	Other Properties
Empoloyee_Id	6	Decimal	Primary key
Start_Date		Date	Not accept blank
Job_Id	10	Var Char	Not accept blank
Department_Id	4	Decimal	Not accept blank

Question 3:

- a) Explain the drawbacks of traditional file system over database management system (6 Marks)

b) State four components of a DBMS

(4 Marks)

Question 4:

a. Database systems are made-up of complex data structures. Discuss Data Abstraction in relation to complexity of database systems (4 Marks)

b.

i. Define database schema (2 Marks)

ii. Explain two types of database schema (4 Marks)

Question 5:

Table below shows details of students. Use it to answer the questions that follows

Student	Student Name	D.O.B	Gender	Course Id	Marks
N001	Jane	26.09.2012	Female	004	70
N002	Andrew	02.05.2010	Male	003	75
N003	Catherine	17.04.1999	Female	004	90
N004	Agnes	15.10.1999	Female	002	92
N005	Noel	20.12.2001	Male	004	65
N006	Martin	27.04.1005	male	001	63

Write an SQL Code that would

a) Display all records of female students who attained more than 70 marks (3 Marks)

b) Display all the Course Id of students (3 Marks)

c) Rename the relation Marks to Students Marks (4 Marks)

Question 6:

In a college, a student is identified by admission number, names which consists of the first and second name, date of birth and age which is derived from the date of birth, their phone numbers which include that of guardian. Each student belongs to a class which is identified by a class name. Students are free to register in one or more clubs. Each club is identified by a club name and club identification code.

Required.

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EXAMINATIONS PAPER**



Discuss the entities, relationships and attributes from the information above (10 Marks)

THE END