

4. As a database administrator, explain the steps that should be taken to ensure security of an information centre database. (20 marks)
5. From the following scenario, answer the questions below:

Scenario

An information consultancy firm supplies temporary specialized staff to bigger companies in the country to work on their project for certain amount of time. The table below lists the time spent by each of the company's employees at other companies to carry out projects. The national Insurance Number (NIN) is unique for every member of staff.

NIN	Contract No.	Hours	Employee Name	Company ID	Company Location
616681B	SC1025	72	P. White	SC115	Belfast
674315A	SC1025	48	R. Press	SC115	Belfast
323113B	SC1026	24	P. Smith	SC23	Bangor
616681B	SC1026	24	P. White	SC23	Bangor

- (a) Find the key for this relation and explain your choice. (5 marks)
- (b) Showing your workings, normalize the table to 3NF (15 marks)



KENYATTA UNIVERSITY
EXAMINATION FOR THE DEGREE OF BACHELOR OF LIBRARY AND
INFORMATION SCIENCE

ISC 305: DATABASE MANAGEMENT SYSTEM

1ST SEMESTER 2022/2023

TIME: 2 HOURS

INSTRUCTIONS:

Answer Question ONE and any other TWO Questions

1. (a) Briefly explain the purpose of each of the five components of a DBMS. (10 marks)
 - (b) Explain the following concepts. (10 marks)
 - (i) Hidden entity
 - (ii) Data definition language
 - (iii) Querying language
 - (iv) Many to many relationship
 - (v) Database models
 - (c) Explain any five advantages of using database system. (10 marks)
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2. Forms are very important tools in the development of a database. Discuss. (20 marks)
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3. Using an information management scenario of your choice do the following:
 - (a) Write a $\frac{3}{4}$ page scenario brief (6 marks)
 - (b) Using the standard notions, draw a well labelled entity model for the scenario. (7 marks)
 - (c) With justification, explain any two queries your model in 3(b) above can answer. (7 marks)