

**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**14/16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**

**SCHOOL OF SCIENCE AND TECHNOLOGY**

**JUNE/JULY EXAMINATION**

**COURSE CODE: CIT843**

**COURSE TITLE: DATABASE MANAGEMENT SYSTEMS**

**TIME ALLOWED:2 Hours**

**INSTRUCTION: Answer Any Four Questions**

1a. What is Data Modeling? 6 marks

b. Why is Data Modeling important? 5 ½ marks

1. List three characteristics of a good data model. 6 marks

2a. Write appropriate SQL statement for each of the following:

1. To create a PRIMARY KEY constraint on the "P\_Id" column when

the table is already created. 4 ½ marks

1. To create a FOREIGN KEY on the "P\_Id" column when the

"Orders" table is created. 4 ½ marks

1. To select only the persons with the first name equal to

"Tove" AND the Last name equal to "Syendson" 4 ½ marks

1. To select the persons with a last name equal to "Hansen" or

"Pettersen" from the Persons table 4 marks

### 3a. Explain what is meant by DDBMS. 5 marks

### b. List the four main dimensions on which DDBMS are classified. 8 marks

### c. What is database security? 4 ½ marks

### 4a. Outline the basic steps in designing a database application. 10 marks

### b. State how to ensure database security at design level. 7 ½ marks

### 5a. Write SQL statement that grants authorization to database users

### shown in the table below; 12 marks

### b. Write SQL statement that revokes authorization granted to Mr. Sola 5 ½ marks

|  |  |  |  |
| --- | --- | --- | --- |
| **Subject** | **Object** | **Action** | **Constraint** |
| Rasheed | Employee | Read | None |
| Rasheed | Employee | Insert | None |
| Rasheed | Employee | Modify | None |
| Rasheed | Employee | Delete | None |
| Bola | Employee | Read | Salary < 50,000 |
| Sola | PurchaseOrder | Insert | Total < 1,000 |
| Sola | PurchaseOrder | Modify | Total < 1,000 |
| Chidi | Employee | Read | None |

6. Explain the following E-R Modeling Constructs with an example each:

* + 1. Entity 4 ½ marks
    2. Relationship 4 ½ marks
    3. Attributes 4 ½ marks
    4. Identifiers 4 marks