Republic of Rwanda
City of Kigali

TVET DISTRICT COMPREHENSIVE ASSESSMENT
SCHOOL YEAR 2022-2023

GASABO DISTRICT
SECTOR: INFORMATION COMMUNICATION AND TECHNOLOGY (ICT)

TRADE: SOFTWARE DEVELOPMENT

RTQF LEVEL: IV

MODULE CODE AND TITLE: SFDSF401, BASICS AND FUNDAMENTALS OF DATABASE

DURATION: 3HOURS
DATE:

INSTRUCTION TO CANDIDATES:
Instructions: This Assessment Consists three (3) sections A, B and C

Section A: All questions are compulsory. 55marks

Section B: Attempt any 3 questions. 30marks

Section C: Choose only one (1) question 15 marks

SECTION A: ATTEMPT ALL QUESTIONS **55marks**

Q1. Define the following term:**/5marks**

a. Data **b**. database **c**. Entities **d**. attributes **e.** information

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 1: Analyze database requirement, Learning Outcome1.1: Define database key terms, models, types and relationships, page 266.

Q2. List 3 types of relationships. **/5marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 1: analyze database requirement, Learning Outcome1.1: Define database key terms, models, types and relationships, page 266.

Q3. Choose the correct answer for the following sentence**/5marks**

Which SQL statement is used to add new data or record in a database?

a) INSERT INTO
b) ADD NEW
c) INSERT NEW
d) ADD RECORD

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE Learning unit 3: Create Database, Learning Outcome 3.1: Create tables and attributes.

Q4. Outline any four different types of database model **/5Marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 1: analyze database requirement, Learning Outcome1.1: Define database key terms, models, types and relationships.

Q5. Define constraints. List and explain types of constraints **/5marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.2: Identify the constraints.

Q6. Complete the description column in this table based each DB constraints**/5marks**

NO	Constraint	Description
1.	Primary key constraint	
2.	Foreign key constraint	
3.	Unique key constraint	
4.	Not null constraint	
5.	Check constraint	

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.2: Identify the constraints.

Q7. Explain the terms 'Record', 'Field' and 'Table' in terms of database. **/5marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 1: analyze database requirement, Learning Outcome 1.3: Determine the information that the database is required to hold.

Q8. Differentiate primary key and foreign key**/5marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.2: Identify the constraints.

Q9. Give any five objectives of database management system **/5marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.3: Develop a data dictionary.

Q10. Give any five advantages of database management system **/5marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.3: Develop a data dictionary.

Q11. Identify and explain 3 methods used to collect the information. **/5marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 1: analyze database requirement, Learning Outcome1.2: Review organizational and task requirements to identify user requirement.

SECTION B: ATTEMPT ALL QUESTIONS **30marks**

Q12. Write syntax of how to create database by using xampp, create table with its attributes and insert new record in created table. **/10 marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE Learning unit 3: Create Database, Learning Outcome 3.1: Create tables and attributes.

Q13. Consider the table BOOKS below: **/10marks**

Book ID	Book name	Edition	Author	Published date	Number
B001	Web design	Ed2	H.olivier	1997	30
B002	Database	Ed1	P. Albert	2001	20
B003	VB	Ed3	M.Claude	1985	14
B004	Web design	Ed1	J.Mata	1998	26

By using the table above, write the SQL commands do the following:

a. Write SQL query to create the table BOOKS **/4marks**
b. Inserting a new record into the table BOOKS **/3marks**
c. Write SQL query to display all records from BOOKS. **/3marks**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE Learning unit 3: Create Database, Learning Outcome 3.1: Create tables and attributes.

Q14. a. Define entity relationship diagram(ERD)

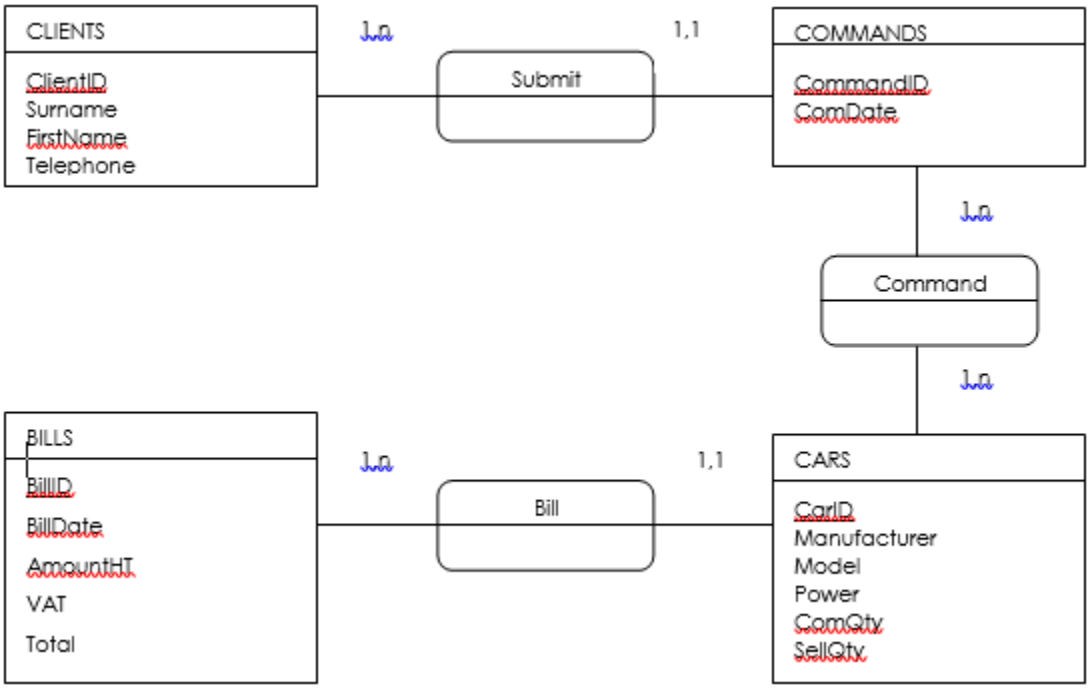
b. List, name and draw Common Entity Relationship Diagram Symbols **/10marks.**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.1: Design an entity relationship diagram (ERD).

Q15. Briefly explain any five goals of DBMS. **10Marks**

SECTION C: CHOOSE ONE QUESTION ANSWER IT.

Q16. Given the following CMD and translate into LMD, before identify all entities, attributes, name of relationship between entities and their cardinalities among them.**/15marks.**



References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.1: Design an entity relationship diagram (ERD).

Q17. a. Define metadata **(5marks)**

b. List 4 types of metadata **(5marks)**

c. Explain types of metadata listed in (b) **(5marks)**

References: SFDSFD401, BASICS AND FUNDAMENTALS OF DATABASE learning unit 2: Design database, Learning Outcome 2.1: Design an entity relationship diagram (ERD).