



**CRAWFORD UNIVERSITY, FAITH
CITY, IGBESA**

**COLLEGE OF NATURAL AND APPLIED
SCIENCES**

**DEPARTMENT OF COMPUTER AND
MATHEMATICAL SCIENCES**

HARMATTAN SEMESTER

SESSION: 2023/2024

COURSE CODE: CSC 307

**COURSE TITLE: DATABASE DESIGN AND
MANAGEMENT**

UNITS: 3

Matric N0:.....

ANSWER ALL (30MINS)

1. A relational database consists of a collection of
a) Tables b) Fields c) Records d) Keys
2. A _____ in a table represents a relationship
among a set of values.
a) Column b) Key c) Row d) Entry
3. The term _____ is used to refer to a row.
a) Attribute b) Tuple c) Field d) Instance
4. The term attribute refers to a _____ of a
table.
a) Record b) Column c) Tuple d) Key
5. Course(course_id, sec_id, semester) Here the
course_id, sec_id and semester are _____
and course is a _____
a) Relations, Attribute b) Attributes, Relation
c) Tuple, Relation d) Tuple, Attributes
6. An attribute is a _____ in a relation.
a) Row b) Column c) Value d) Tuple

7. State true or false: If a relation consists of a
foreign key, then it is called a referenced relation of
the foreign key dependency. a) True b) False
8. Which of the following is not an integrity
constraint? a) not null b) unique c) identical
d) check
9. What is the function of the not null constraint?
a) It prevents illegal data from being entered into the
database b) It ensures that data is entered into the
database c) It ensures that the data entered is unique
d) None of the mentioned
10. Which command is used to create a new relation
in SQL a) create table(, ...) b) create relation(, ...)
c) new table(, ...) d) new relation(, ...)
11. Choose the option that correctly explains in
words, the function of the following relational
algebra expression

$\sigma_{\text{year} \geq 200}$ (book \bowtie borrow)

- a) Selects all tuples from the Cartesian product of
book and borrow
- b) Selects all the tuples from the natural join of book
and borrow wherever the year is lesser than 200
- c) Selects all the tuples from the natural join of book
and student wherever the year is greater than or
equal to 200
- d) Selects all tuples from the Cartesian product of
book and borrow wherever the year is greater than or
equal to 200
12. The attributes of a relationship are called as
_____ attributes a) Relational b) Conjunctive
c) Descriptive d) None of the mentioned
13. If $K \rightarrow R$ then K is said to be the _____ of R
a) Candidate key b) Foreign key c) Super key
d) Domain
14. What is an Instance of a Database?
a) The logical design of the database system

b) The entire set of attributes of the Database put together in a single relation

c) The state of the database system at any given point of time

d) The initial values inserted into the Database immediately after its creation

15. Which of the following data types does the SQL standard not support? a) char(n) b) String(n)

c) varchar(n) d) float(n)

Answer

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2

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Theory (Answer all question here)

Course (code, title, unit)

Student (name, matric_no, score)

Write a relational algebra to display

1. Course titles offered by the department

Ans

2. Name of all the students who offer CSC 307

Ans

3. The name and score of any student whose score is less than 40 in CSC 307

Ans

4. Rename course schema to Subject and the attributes to A,B,C

Ans

5. Display the Cartesian product of course and student schema

Ans