INDIAN SCHOOL AL WADI AL KABIR

Class: X	Department: Computer Science
WORKSHEET 3 PART B UNIT 3	**INFORMATION TECHNOLOGY (402)** **Database Management System Using LibreOffice Base** **Chapter 10. Working with Multiple Tables**

1 mark Questions

1. Read the following statements and answer the following:
   Statement A: A table has a defined number of columns but can have any number of rows.
   Statement B: Each row is identified by its columns name.
   a) Statement A is correct b) Statement B is correct c) Both are correct d) Both are incorrect
2. Which of the following is NOT a type of text data type?
   (a) Memo (b) Varchar (c) **Float** (d) Char
3. Which of the following actions can be performed once the tables are created in a database?
   (a) Add a field in a table (b) Rename a table (c) Delete a table (**d) All of the above**
4. Which of the following is checked by a DBMS?
   (a) Redundancy (b) Inconsistency (c) **Both (a) and (b)** (d) Neither (a) nor (b)
5. Which of the following is required to set a relationship between the two tables?
   (a) Both the tables must be in different databases (b) **Both the tables must have a common field**
   (c) Both the tables must have the same name (d) Both tables must be stored in documents folder only.
6. If a record is added in a master table, which of the following is NOT true for transaction table
   (a) The record in the master table is called the master record
   (b) The corresponding record in transaction table can only be entered once.
   (c) The record in the transaction table is called the transaction record.
   (d) It is possible to add a record in the master table
7. Which type of relationship exists between a student and the subjects studied by him/her?
   (a) One-to-one (b) One-to-many c) **Many-to-many** (d) All of the above
8. Which of the following menus contains the Relationship option?
   (a) Edit (b) File (c) **Tools** (d) View
9. The list of tables to be added is displayed in the _____ dialog box in the Relationship Screen.
   (a**) Add Tables** (b) Add Databases (c) Both (a) and (b) (a) Neither (a) nor (b)
10. In the relationship design screen, the relationship between the two tables is done using _____ operation.
    (a) Click (b) Double Click (**c) Drag and Drop** (d) Right click
11. Which of the following is NOT an option that can be used to maintain referential integrity in a database?
    (a) No Action (b) Set NULL (c) Set Default **(d) Set Value**

SUBJECTIVE TYPE QUESTIONS

12. Give any two advantages of relating a table in a database.
    Two advantages of relating tables in a database:
    1. **Data Consistency and Accuracy:** Relationships ensure that data remains consistent across tables,for example, a student record must exist in the master table before marks are entered in the related table.
    2. **Reduced Data Redundancy:** Relating tables avoids storing the same information multiple times by linking related data instead of duplicating it.

13. How is redundancy or inconsistency controlled in a database? Explain with an example.

Ans: Redundancy means storing the same data more than once, while inconsistency occurs when the same data appears differently in multiple places.
A Database Management System (DBMS) controls both by using relationships— i.e., dividing data into related tables instead of repeating it.

Without relationships (redundant data):

StudentName	Class	Subject	Teacher
Aisha	10A	Science	Ms. Leena
Aisha	10A	Math	Mr. Kumar

The student's name and class are repeated — redundancy.
If "Aisha" changes class and only one record is updated, it causes inconsistency.

With relationships (controlled redundancy):
Table 1 – Students

StudentID	StudentName	Class
1	Aisha	10A

Table 2 – Subjects

SubjectID	SubjectName	Teacher
1	Science	Ms. Leena
2	Math	Mr. Kumar

Table 3 – Enrollments

StudentID	SubjectID
1	1
1	2

Now, student details are stored only once in the Students table, this eliminates redundancy and inconsistency.

14. Define referential integrity. Who maintains referential integrity in a database?
Ans:
Definition: Referential integrity is a rule in a database that ensures the relationship between tables remains consistent and valid. It means that a foreign key in one table must always refer to an existing primary key in another table.

Example:
If there is a Students table and a Marks table —
Every student_id in the Marks table must exist in the Students table.
You cannot enter marks for a student who doesn't exist in the master Students table.

Who maintains it:
The Database Management System (DBMS) maintains referential integrity automatically when relationships and foreign keys are defined between tables.

15. Differentiate between one to one relationship and one to many relationship. Give suitable examples to explain your answer.

Basis	One-to-One Relationship	One-to-Many Relationship

Definition	A single record in one table is related to **only one** record in another table.	A single record in one table is related to **many** records in another table.
Example	Each **student** has **one unique ID card**.	One **teacher** can teach **many students**.
Primary–Foreign Key Relation	The primary key in one table appears **only once** as a foreign key in another.	The primary key in one table appears **multiple times** as a foreign key in another.

16. Explain many to many relationship with an example.

A many-to-many relationship exists when multiple records in one table are related to multiple records in another table.
Consider a database for a school:

One student can study many subjects.
One subject can be studied by many students.
This forms a many-to-many relationship between Students and Subjects.

Implementation:
Tables:

1. Students

student_id	**name**
1	Aisha
2	Ravi

2. Subjects

subject_id	**subject_name**
101	Math
102	Science

3. Enrollments

student_id	**subject_id**
1	101
1	102
2	101

s Aisha studies Math and Science; Ravi studies Math. Thus, many students can take many subjects — a many-to-many relationship.

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