IS.220: Lecture 2

Multiple-Choice Questions (MCQs)

1. **Who is responsible for authorizing access to the database and monitoring its use?**
   a) Database Administrator (DBA)
   b) Database Designer
   c) End-user
   d) System Analyst

2. **Which category of database users focuses on developing and maintaining database applications?**
   a) Database Administrators
   b) End-users
   c) System Analysts & Application Programmers
   d) Database Operators

3. **Which of the following is NOT a category of data models?**
   a) Conceptual data models
   b) Physical data models
   c) Structural data models
   d) Implementation data models

4. **A database schema is best defined as:**
   a) The actual data stored in a database
   b) The description of a database structure
   c) A backup of the database
   d) A transaction log of the database

5. **What does the term 'Database State' refer to?**
   a) The initial database structure
   b) The content of a database at a specific moment in time
   c) A database transaction
   d) A database query

6. **The main purpose of the three-schema architecture is to:**
   a) Store data in multiple databases
   b) Separate user applications from the physical database
   c) Reduce database storage space
   d) Improve the speed of query execution

7. **Which of the following levels in the three-schema architecture describes the physical storage of data?**
   a) External schema
   b) Conceptual schema
   c) Internal schema
   d) Logical schema

8. **Which type of data independence allows changes in the conceptual schema without affecting the external schema?**
   a) Physical data independence
   b) Logical data independence

c) Conceptual data independence
d) Structural data independence

9. **Which database language is used for defining the database schema?**
   a) Data Definition Language (DDL)
   b) Data Manipulation Language (DML)
   c) Query Language
   d) Procedural Language

10. **What does SQL stand for?**
    a) Structured Query Language
    b) Simple Query Language
    c) Sequential Query Language
    d) Standardized Query Logic

True/False Questions

11. **Database Administrators are responsible for database design and defining constraints.** *(False)*
12. **The database schema frequently changes whenever the database is updated.** *(False)*
13. **End-users are the primary reason databases exist.** *(True)*
14. **Physical data models describe how data is stored internally in a computer system.** *(True)*
15. **A schema diagram visually represents the structure of a database.** *(True)*
16. **The external schema in the three-schema architecture provides multiple user views of data.** *(True)*
17. **Logical data independence means changing the physical storage structure without affecting the conceptual schema.** *(False)*
18. **DDL (Data Definition Language) is used for database retrieval and updates.** *(False)*
19. **SQL was standardized by ANSI in 1986 and by ISO in 1987.** *(True)*
20. **The SELECT statement in SQL is used to retrieve data from a database.** *(True)*