

SET-A

1. The university administrator wants to generate a report that lists the names of all students enrolled in a course called "Database Systems." Which abstraction level and approach would they use? **marks -2**

- a. View Level: The report involves querying multiple tables to fetch and display student names, which happens at the view level.
- b. Logical Level: Define the relationships between the tables and check for the schema design.
- c. Physical Level: Access the file system where the course data is stored directly.
- d. Logical Level: Write SQL queries to update the Students table for each enrollment.

2. The database administrator wants create a table course where he has to define attribute, data types, constraints and give a relationship with other tables. Which abstraction level and approach would they use? **marks -2**

3. A company is developing a ticket booking system for a theater. The system should handle user interactions, business logic (e.g., availability checks, pricing), and database operations efficiently.

Which statement best describes the advantages of using a three-tier architecture over a two-tier architecture for this system? **marks -2**

- a) In a three-tier architecture, the application logic is embedded in the database, making it faster for small-scale applications. ✗
- b) In a three-tier architecture, the business logic is separated into an application layer, improving scalability and enabling support for multiple clients. ✓
- c) In a two-tier architecture, the presentation and database layers are separated, allowing more modular development. ✗
- d) In a three-tier architecture, users directly access the database, eliminating the need for an application server.

4. Differentiate between file processing system and database management system based on consistency, redundancy and atomicity problems with examples. **marks -6**

5. Define relational database with examples. **marks -3**