

Daffodil International University
Faculty of Business and Entrepreneurship
Department of Business Administration
Program: BBA

Semester: Spring- 2026
Time: 1 hour
Course Code: **0612-411**
Section: 64 A

Examination: Midterm
Full Marks: 20
Course Title: **Database Management System**
Teacher's Name: FK

Instructions:

1. **Answer all the questions.**
2. **Any kind of unfair means is strictly prohibited.**
3. **Read the question attentively, then answer to the point; relevant examples will carry greater marks.**

Question No. 1: [CLO 1, Level 2]

[Marks: 7]

A large university uses a traditional file system where the admissions office maintains student personal information, the accounts department maintains fee records, and the examination office maintains academic records in separate files, and over time it is discovered that a student's address is different in all three departments because updates were made independently without synchronization, causing miscommunication, lost mail, and administrative confusion; **Explain** in detail which file system limitation is responsible for this problem and how a DBMS resolves it.

Question No. 2: [CLO 1, Level 2]

[Marks: 7]

A database designer first creates a high-level diagram showing entities and relationships without worrying about tables or implementation details, and later converts this design into structured tables with rows and columns for actual database implementation. **Explain** which two data models are used in these two stages and how they differ

Question No. 2: [CLO 2, Level 4]

[Marks: 6]

A company's executives need to view business performance from different perspectives, such as total revenue by year, by product line, by geographical region, and by customer type, and they also want to quickly switch between these perspectives without restructuring the database each time; **Analyze** how a multidimensional database structure supports this requirement and how dimensions improve decision-making.