ICS 1202/ IIT 1202/ ISE 1202: Database Systems Assignment 1

1. Using a diagram, illustrate and explain the database life cycle, clearly explain the four stages and what happens at each stage. **[10]**

2. The three-tier architecture is commonly used to describe a database management system.

    i. Draw a diagram to illustrate this architecture. **[5]**

    ii. Describe the role of each tier. **[3]**

    iii. Discuss **three (3)** advantages and **three (3)** disadvantages of this architecture. **[3]**

3. Distinguish between Multivalued functional dependency and Transitive functional dependency. **[3]**

4. Securing a database aims to achieve the following objectives:

    - *Confidentiality*
    - *Integrity*
    - *Availability*

    i. Briefly describe what is meant by each of the above objectives. **[3]**

    ii. For each objective, describe the appropriate security controls. **[3]**