(a) Examples of Insertion, Deletion, and Update Anomalies in the Above Table:

Insertion Anomaly:

- To add a new Tutor, we would need to have details about a new unit and student, even if the Tutor hasn't been assigned yet. This is because of the current structure of the table where every tutor is associated with a student and a unit.

Deletion Anomaly:

- If we delete the row with UnitID "U1" and StudentID "St1", we would lose the information about Tutor "Tut1" along with their email.

Update Anomaly:

- If Tutor "Tut1" changes their email address, we would need to update multiple rows (wherever "Tut1" appears). If we miss updating any one of the rows, it could lead to data inconsistency.

(b) Functional Dependencies:

Here are the potential functional dependencies, given the attributes in the table:

- UnitID, StudentID, Date -> Grade, Topic, Room, Book
- TutorID -> TutEmail

Assumptions:

- A unique combination of UnitID, StudentID, and Date determines the Grade, Topic, Room, and Book.
- A TutorID always determines the Tutor's email.

(c) Convert this Table to Second Normal Form (2NF) and Third Normal Form (3NF):

To satisfy 2NF, we need to make sure that no non-prime attribute is dependent on a part of the candidate key. It seems TutorID is only dependent on itself and does not relate to UnitID, StudentID, Date (composite key), so we need to separate it.

To satisfy 3NF, a table should be in 2NF and there should be no transitive dependency for non-prime attributes. In this case, the Tutor email is dependent on the TutorID, so we should separate this as well.

Table1: StudentUnit

- UnitID
- StudentID
- Date
- Topic
- Room
- Grade

- Book
- TutorID (Foreign Key)

Table2: Tutor

- TutorID
- TutEmail

(d) Functional Dependencies, Primary Key, and Foreign Keys after Normalization:

For Table1 (StudentUnit):

- Functional dependencies:
    - UnitID, StudentID, Date -> Grade, Topic, Room, Book, TutorID
- Primary key:
    - (UnitID, StudentID, Date)
- Foreign key:
    - TutorID (references Tutor.TutorID)

For Table2 (Tutor):

- Functional dependencies:
    - TutorID -> TutorEmail
- Primary key:
    - TutorID
- There is no foreign key in this table.