**Problem Set 1: 3NF**

1. Consider a relation *R*with five attributes *ABCDE*. Dependencies of R is: *A → B*, *BC → E*, and *ED → A*?  Is *R*in 3NF?
2. Apply 3rd Normalization for the above 2nd problem?
3. Apply 3rd Normalization for the above 3rd problem?
4. Apply 3rd Normalization for the above 4th problem?

**Problem Set 2: BCNF**

1. Consider the relation schema *R (A,B,C)*, which has the FD *B → C*. If *A*is a candidate key for *R*, is it possible for *R*to be in BCNF? If so, under what conditions? If not, explain why not.
2. Apply BCNF for the above 2nd problem?
3. Apply BCNF for the above 3rd problem?
4. Apply BCNF for the above 4th problem?