For each question below, answer the following:

  a) What are the keys for the relation
  b) Is the relational in 3NF? Why or why not?
  c) Is it in BCNF? Why or why not? If not, then decompose into BCNF
  d) Is the decomposition in (d) a dependency preserving decomposition? Why?

Ques.1: Consider the schema R1=(C,T,H,R,S,G) with attributes Course(C), Time (T), Hour (H), Section (S), Grade (G) Room (R) and the dependencies:

\[ C \rightarrow T \quad CS \rightarrow G \quad HS \rightarrow R \quad HT \rightarrow R \quad HR \rightarrow C \]