PART 2

1. Consider a relation schema R with attributes ABCDEF GH with functional dependencies S:
S = {A → CF, BCG → D, CF → AH, D → B, H → DEG}

(a) Which of these functional dependencies violate BCNF?

A+ = ACFHDEGB – Does not violate
BCG+ = BCGD – Violates
CF+ = CFAHDEGB – Does not violate
D+ = DB – Violates
H+ = HDEGB – Violates

2. Consider a relation R with attributes ABCDEF and functional dependencies S:
S = {AB → EF, B → CEF, BCD → AF, BCDE → A, BCE → D, DF → C}

(a) Compute all keys for R.

B+ = BACDEF by inspection, and is the only key since no other candidate key can contain B but itself