Exam 2

1. Give Context Free Grammar (CFG) for L = { w | na(w) < nb(w) < 2 na(w)}.
2. Give Push Down Automata (PDA) for L = {aibjck, i = j – 2k and i > 0}
3. Prove whether L = { anbnwwR } is context free or not
4. Prove whether L = { anwbnwR } is context free or not
5. Prove whether L1 ∩ L2, where L1 = { w | na(w) = nb(w) } and L2 = { wwR }, is context free or not.
6. Consider operation G given Context Free Language L, G(L) produces a new language L’ where L’ = {All even length string in L}, Is Context Free Language closed under G? Prove your conclusion.