GRAPH THEORY

Tutorial – 4

1) Let G be a simple n-vertex graph with $n/2 - 1 \leq \delta(G) \leq n-2$. Prove that G is k-connected for all k with $k \leq 2\delta(G) + 2 - n$.

2) If G be simple n-vertex graph.

   (a) If $\delta(G) \geq \lfloor n/2 \rfloor$, then prove that, $\kappa'(G) = \delta(G)$.

   (b) If $d(x) + d(y) \geq n-1$ whenever $!(x \leftrightarrow y)$, then prove that, $\kappa'(G) = \delta(G)$.