(a) Let W be a walk in G of length K. Next we construct W' as follows:

If W is: $x_1 \sim x_2 \sim \cdots x_{K-1} \sim x_K$

then W_1 is: $x_1 \sim x_2 \sim \cdots x_{K-1} \sim x_K \sim x_{K-1}$.

Since we can repeate edges and vertices in a walk. W_1 is a valid walk in G of length $K+1$. Then G cannot have a longest walk.

(b) In a path we can't have repeated edges and vertices. In a connected graph we have atleast $n-1$ edges. Thus $b = n-1$ (trees, acyclic). This means that if W is a walk of length $K > n-1$, then walk is not acyclic and it must have a repeated vertex.

Thus G must have a longest path.