GRAPH THEORY: CLASS 14

1) Show that the graph G below is Hamiltonian.

2)
a) Which complete bipartite graphs are Hamiltonian?
b) Let the wheel W_n define to be $K_1 + C_n$.
For which value of n, is the wheel W_n Hamiltonian?

3) Give an example of a graph G of order n with $\deg(v) \geq \frac{n-1}{2}$ for every vertex v that is not Hamiltonian.

4) Consider the bipartite graph G_1 and G_2 below. Is there a matching for the set A below? If yes, show the matching. If no, prove it!