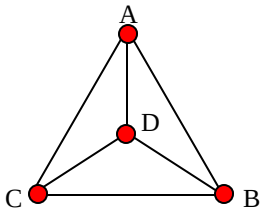
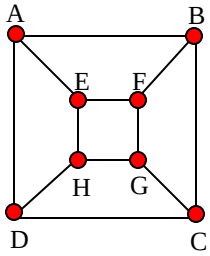
Tutorial Sheet 16
(Eulerian & Hamiltonian Graphs)

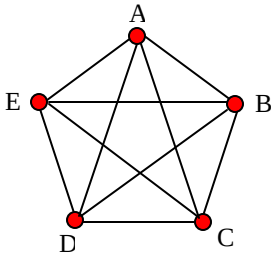
1. Decide which of the following graphs are Eulerian or Hamiltonian, or both, and write down an Eulerian path or Hamiltonian cycle where possible:



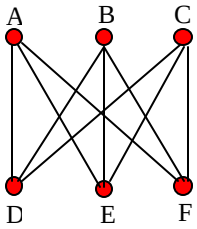
(a)



(b)

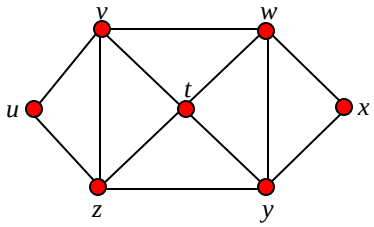


(c)

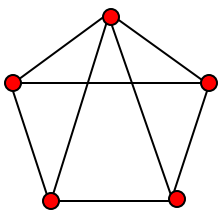


(d)

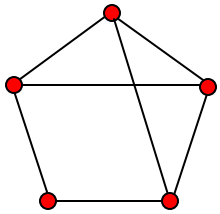
2. Find an Eulerian path starting with *uvz* in the following graph.



3. Check whether the conditions of Dirac' s theorem and Ore' s theorem hold for the following Hamiltonian graphs:

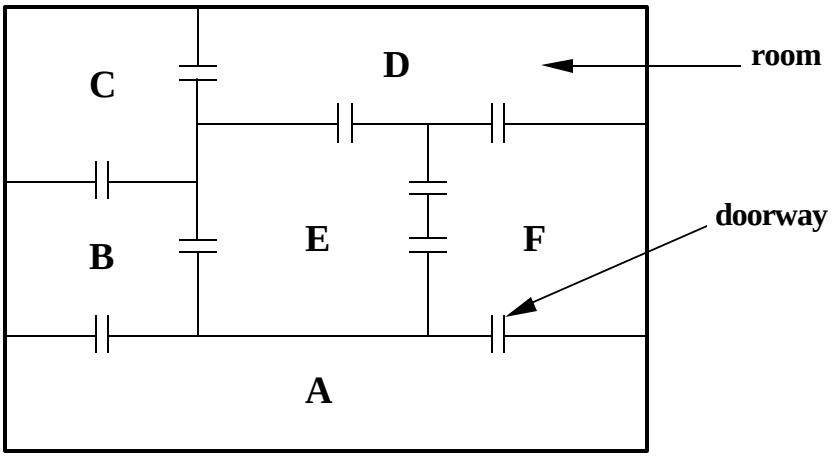


(a)



(b)

4. The figure below shows a floor plan of an office.



Represent if by a graph. Hence determine whether it is possible to walk through each doorway exactly once starting and ending at **A**?