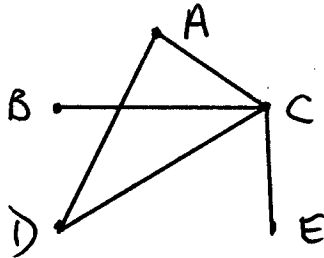


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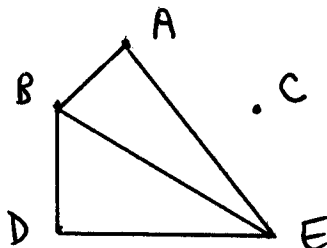
Sample Solutions to: Practice Questions - Set 6

1. It is not possible because a simple graph cannot have multiple (parallel) edges. The complete graph with 5 vertices has only $C(5,2) = 10$ edges, and this is the maximum number of allowable edges in such a simple graph; therefore, 12 edges is not possible.

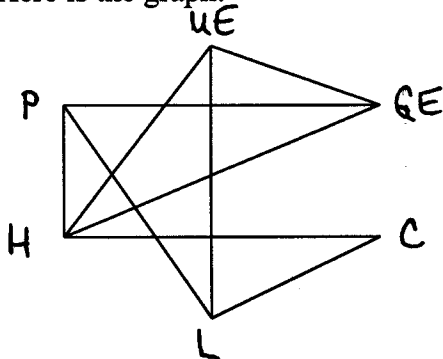
2. (a)



(b)



3. Here is the graph:



One solution is as follows:

For the first time slot, let's pick a committee that has the most members in common (i.e., has the highest degree). This is the Hiring (H) committee. Since the Library (L) committee has no members in common with the Hiring committee, we can assign it in the first time slot, too. The other committees cannot meet at this time.