1. [Circle one] Which is true about a simple cycle?
   a. it can pass through a vertex more than once
   b. it cannot pass through a vertex more than once
   c. it begins at one vertex and ends at another
   d. it passes through only one vertex

2. [Circle one] A ____ is an undirected connected graph without cycles.
   a. multigraph
   b. digraph
   c. connected component
   d. tree

3. [Circle one] A graph is _____ if each pair of distinct vertices has a path between them.
   a. complete
   b. full
   c. simple
   d. connected

4. [Circle all that are true] A multigraph
   a. sometimes can have loops.
   b. cannot be connected.
   c. has multiple edges between vertices.
   d. must be directed.

5. [Circle all that are true]
   a. A complete graph is any graph that has a path between every pair of vertices.
   b. All undirected graphs have an odd number of even edges.
   c. A bipartite graph has exactly two connected components.
   d. A simple graph can have 4 vertices with degrees 1, 2, 2 and 3.