

CS200 Quiz 9: Graph Theory (11/13/08)

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.