ECE608, Spring 2015, Quiz 3

First Name: ___________________ Last Name: ____________________

I certify that I have neither given nor received unauthorized aid on this quiz.

Signed: ___________________

Use only the space provided on this page to answer the following question.
Do not write your answers on the other side of the page.

An undirected graph has the paths < v1, v2, v3, v4, v5 > and < v1, v6, v3, v7, v5 >.

1. List all the simple paths from v1 to v5. You do not need to repeat the given paths.

2. List a simple path from v7 to v2 that uses four edges.

Reminder: A path is simple if all the vertices in the path are distinct.

Answers:


A directed graph has the paths \(< v_1, v_2, v_3, v_4, v_5 >\) and \(< v_5, v_7, v_3, v_6, v_1 >\).

1. List all the simple cycles in the graph.

2. List a simple path from \(v_7\) to \(v_2\).

Reminder: A path is simple if all the vertices in the path are distinct.

Answers:

1. \(< v_1, v_2, v_3, v_6, v_1 >, < v_3, v_4, v_5, v_7, v_3 >\).

2. \(< v_7, v_3, v_6, v_1, v_2 >\).