1) A _______________ documents the strategy that will be used to verify and ensure that a product or system meets its design specifications and other requirements.

2) The _______________ of a program P is a directed graph G = (N, E, s, e) consisting of a set of nodes N and a set of edges E = {(n,m) n,m in N} connecting the nodes. Each node denotes a basic block which itself is a sequence of instructions. It is important to note that in ever basic block the control enters through the entry node and leaves at the end without stopping or brancing except at the end.

3) Is 'testability' an instrinsic or extrinsic property of software? Explain.

4) What are the problems with the current state of the art in automatic test data generation?

5) How does genetic programming relate to the other material in this course?

6) What special issues arise in testing component-based software?
7) Attached find the code and documentation for the Unix cut program.
   a) What happens if the first line of a file is empty and I have specified that I want to extract the second field (and no other options)?
   
b) What happens if I try to:
      
      cut -f2 -b1 testdata
      
      Why?
   
c) So far, none of my test data reaches line 549. What would be a simple test case that would exercise line 549?
   
d) How are overlapping ranges sorted out in this program?