Study Guide for Test 2 – CSC640 – Fall 2003

The following types of questions are examples only. You are responsible for all of the topics in ch. 10, 12, 14-15, 18-20, 23, 24, 27 of the textbook and any of my notes or handouts. Warning: you should read the textbook; reading only the author’s Power Point slides is not sufficient.

- Terminology and basic facts on above topics: True/False, Multiple Choice, Matching
- Examples of essay type questions on above topics:
  - Explain the pros and cons of ..
  - Compare …
  - Explain why ZZZ would be appropriate or not for this problem …
  - Describe five …

Problem-type questions:
- Given some code, define optimal black box, white box, or path test cases for it
- Given some code, analyze it for common types of defects
- Given some code, draw its flow graph and/or list all independent paths in it
- Given a diagram of the classes and subsystems in a product, give a bottom-up or top-down integration test plan (describing order of testing and what stubs and drivers would need to be written)
- Given a group of classes, draw a software architecture diagram (e.g. an open or closed layered architecture, repository, client-server, model-view-controller); or given a diagram of a system, classify its type of architecture and explain the benefits and/or problems in its design
- Given the design of a subsystem or a class’s interface, explain how to redesign it to improve its reusability.
- Given some code, rewrite it to increase its reliability (fault avoidance and/or fault tolerance).
- Given a description of a graphical user interface, describe its usability problems in terms of the principles covered in ch. 15
- Estimate program complexity (e.g. using function points or McCabe’s cyclomatic complexity)