

CIS-2110 Midterm Study Guide

The midterm will last for 75 minutes, and consist of 2 parts covering material in the Green Book chapters 2 and 3 and the assignments:

- A - multiple choice
- B - given problem statement(s), develop a hierarchy model, flow chart, and/or pseudocode

The specific guidance below is intended to help you organize and focus your studying **for portion A of the exam**. The end of chapter review quizzes are good preparation for part A.

Chapter 2: Structured Problem Solving

- What is a model?
- **Overview of Structured Problem Solving**
 - The three categories of issues
 - Separation of Concerns
 - Essential and Implementation models
 - Modularity and hierarchy
 - Spiral approach vs. waterfall
- **Structured Problem-Solving Methodology**
 - 4 Steps in the problem-solving approach
- **Walk-throughs**
 - Humanal and Program-level walk throughs.
- Approaches to Input termination.
- Software reusability
- Note that most of the questions in the review Quizzes come from pages 2-8 to 2-15
- End of chapter quiz questions to ignore:
 - Quiz 2-1 ignore #1, 2 / Quiz 2-2 ignore #1, 7

Chapter 3: Process Modeling in Structured Problem Solving

- Introduction
 - Essential and implementation models
 - Sequence, selection, and iteration
- Essential Model Using Hierarchy Charts
 - Control and Primitive Modules
 - Modularity and hierarchy
- Implementation Model Using Flowcharts
 - Flowchart notation
 - Default directions for selection symbol
- Implementation Model Using Pseudocode
 - The main module
 - How modules are invoked
- Included within Part A of the exam will be questions similar to the chapter 3 review quizzes, where you will be asked questions about a flowchart and/or pseudocode that will be provided in the exam.