Assignment 10

(**Due dates: by Friday, 5/1/2009—for bonus 5%
by Wednesday, 5/6/2009—for full credit
Email or printout submission.**)

Your name:	Grade:

Important notice on how to submit and grade this assignment:
- You do NOT have to write the question text. You need to **write the question number** for each question.

1. Provide an operational definition for computers.

2. The computer has played different roles in our life. What are they? Give an example for each of them.

3. Briefly describe the ACM/IEEE code of ethics.

4. What is BNF? What is EBNF? Explain why and how the following personal mailing address is an example of US-Post-Address BNF defined by the following diagram?

        John Smith Jr.
        352 Lafayette Street
        Salem, MA 01970

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<postal-address> ::= <name-part> <street-address> <zip-part>

    <name-part> ::= <personal-part> <last-name> <opt-jr-part> <EOL>
                  | <personal-part> <name-part>

 <personal-part> ::= <first-name> | <initial> "."

<street-address> ::= <opt-apt-num> <house-num> <street-name> <EOL>

     <zip-part> ::= <town-name> "," <state-code> <ZIP-code> <EOL>

   <opt-jr-part> ::= "Sr." | "Jr." | <roman-numeral> | ""
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5. Give some examples of computer crime. Discuss how to prevent computer crimes.

6. The advances of computer science have raised new questions in social and ethical scenarios. List some of these questions.

7. Briefly describe the following concepts within the area of Professional Responsibility for Computing Engineers:

- Intellectual property rights
- Confidentiality

8. What are the four major phrases of software life cycle?

9. Compare and contrast software requirements and specifications in the analysis phrase.

10. Briefly describe the following testing strategies:

- Glass-box testing
- Black-box testing
- Validation testing
- Defect testing

11. What is software testing?

12. What is software evolution?

13. In the development of software applications, formal documentations are often the results of each stage. List at least 3 different types of such documentations.