

This print-out should have 14 questions, check that it is complete. Multiple-choice questions may continue on the next column or page: find all choices before making your selection. The due time is Central time.

001 (part 1 of 1) 10 points

Software maintenance is defined as which of the following activities?

1. Verification of proper operation
2. Modifying the software extending it to solve new applications
3. Adding new features
4. All of the these activities
5. Fixing bugs

002 (part 1 of 1) 10 points

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What does **ADC** stand for?

1. Analog to Digital Converter
2. Analog Domain Conversion
3. Analog Device Chip
4. None of these answers
5. Algorithm Development Criteria
6. Arithmetic Decimal Calculation

003 (part 1 of 1) 10 points

⊙=+++++⊙

Which term best describes a digital watch?

1. none of these
2. microcomputer
3. embedded system
4. microprocessor

5. microcontroller

004 (part 1 of 1) 10 points

What does **LCD** stand for?

1. Light Crystal Device
2. None of these answers
3. Light Circuit Display
4. Light Collecting Device
5. Liquid Crystal Display
6. Logical Calculation Device

005 (part 1 of 1) 10 points

⊙=+++++⊙

Which term best describes the IBM-PC, the complete desktop computer with memory keyboard display disks?

1. none of these
2. microprocessor
3. embedded system
4. microcomputer
5. microcontroller

006 (part 1 of 1) 0 points

⊙=+++++⊙

Which term best describes the Motorola 6812, the single chip integrated circuit?

1. microprocessor
2. microcontroller
3. none of these
4. microcomputer

5. embedded system

007 (part 1 of 1) 0 points

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Which term best describes the Intel Pentium, the really big chip located on the motherboard?

1. microcomputer
2. embedded system
3. microprocessor
4. none of these
5. microcontroller

008 (part 1 of 1) 10 points

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Which of the following statements best defines a **nonvolatile memory**?

1. The information stored in the memory can only be read and not written. The memory is classified as a read-only memory.
2. The information stored in the memory is programmed at the factory and can not be changed by the software.
3. The information stored in the memory is lost when the power to the computer is removed.
4. The information stored in the memory can be read and written multiple times. The memory is classified as a read/write memory.
5. The information stored in the memory is not lost when the power to the computer is removed.

009 (part 1 of 1) 10 points

Which of the following is a true statement

describing an arrow in a **call-graph**?

1. None of these answers
2. The arrows describe the sequence of operations performed by the computer.
3. The tail is placed on a module specifying the source of the data, the arrow is labeled with a description of the data itself, and the head (pointy-end) is placed on the module to which the data is being passed.
4. Software module M1 calls a second module M2. The tail is placed on M2 and the head (pointy-end) is placed on M1.
5. The tail is placed on a module needing the data, and the head (pointy-end) is placed on the module from which the data is obtained.
6. Software module M1 calls a second module M2. The tail is placed on M1 and the head (pointy-end) is placed on M2.

010 (part 1 of 1) 10 points

Which of the following is a true statement describing an arrow in a **data flow graph**?

1. The tail is placed on a module specifying the source of the data, the arrow is labeled with a description of the data itself, and the head (pointy-end) is placed on the module to which the data is being passed.
2. The arrows describes the sequence of operations performed by the computer.
3. The tail is placed on a module needing the data, and the head (pointy-end) is placed on the module from which the data is obtained.
4. None of these answers
5. Software module M1 calls a second module M2. The tail is placed on M1 and the head (pointy-end) is placed on M2.
6. Software module M1 calls a second mod-

ule M2. The tail is placed on M2 and the head (pointy-end) is placed on M1.

011 (part 1 of 1) 10 points

Which explanation best describes a **structured program**?

1. A structured program is software written by combining any of the three basic components: sequence, if-then conditional, and while-loop.
2. A structured program is software written in a high-level language like C.
3. A structured program is software where the call-graph can be drawn as a tree.
4. A structured program is any software that does not include go-to.
5. None of these answers
6. A structured program is software written using a well-defined development process that includes analysis, design, implementation, and testing.

012 (part 1 of 1) 10 points

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What term best describes the sequence of analysis, design, implementation and testing of a product?

1. None of these answers
2. Maintenance
3. Product development cycle
4. Flowchart
5. Debugging
6. Data flow graph

013 (part 1 of 1) 10 points

Which definition best describes the **dynamic**

efficiency of a program?

1. The time required to execute the program; a quantitative measure of how fast the program executes.
2. The total amount of memory required to run the program, including both data storage and memory required to store the program itself; a quantitative measure of how big the program is.
3. None of these answers
4. The stability of the program; a static measure of how stable the program is.
5. A measure of how good the software is at adhering to the principles of structured programming.
6. The efficiency with which the program can be changed; a measure of how easy it is to change a program; a qualitative measure of how good a program is.

014 (part 1 of 1) 10 points

Which definition best describes the **static efficiency** of a program?

1. The efficiency with which the program can be changed; a measure of how easy it is to change a program; a qualitative measure of how good a program is.
2. The total amount of memory required to run the program, including both data storage and memory required to store the program itself; a quantitative measure of how big the program is.
3. The time required to execute the program; a quantitative measure of how fast the program executes.
4. The stability of the program; a static measure of how stable the program is.
5. None of these answers

6. A measure of how good the software is at adhering to the principles of structured programming.