



on Computer Architecture

Instructions: For each question, choose the single best answer. Make your choice by clicking on its button. You can change your answers at any time. When the quiz is graded, the correct answers will appear in the box after each question.

1. What is the **architecture** of a processor?

- ☐ A. the style and colors for the case and monitor.
- ☐ B. the type of operating system and software that the computer runs.
- ☐ C. the shape of the chip and the layout of its connector pins.
- ☒ D. a description of the basic components of a processor chip and of its basic operations.

D

2. What language allows the programmer to program the processor at the architectural level?

- ☒ A. assembly language
- ☐ B. Java
- ☐ C. FORTRAN
- ☐ D. C

A

3. What is the **machine cycle**?

- ☐ A. One machine cycle consists of all the steps taken in executing a program.
- ☐ B. A machine cycle is how a cold computer is booted into running an operating system.

- ☒ **C.** A machine cycle is the process through which one machine instruction is executed.
- ☐ **D.** A machine cycle is the steps through which a byte is fetched from memory.

4. What are the three steps in the machine cycle?

- ☒ **A.** fetch, increment, execute
- ☐ **B.** increment, fetch, execute
- ☐ **C.** load, compile, run
- ☐ **D.** wash, rinse, spin dry

5. What is a **machine instruction**?

- ☐ **A.** a pattern of bits that corresponds to one unit of data.
- ☐ **B.** a signal sent across the system bus that controls the operation of the computer.
- ☒ **C.** a pattern of bits that asks for one fundamental operation of the processor.
- ☐ **D.** a signal sent by the system clock that starts one machine cycle.

6. What part of the processor indicates which machine instruction is next in line for execution?

- ☐ **A.** The address bus.
- ☐ **B.** The memory address register.
- ☒ **C.** The program counter.
- ☐ **D.** The system clock.

7. What is a register?

- ☐ **A.** a part of the processor that performs an operation.
- ☐ **B.** a part of the processor that keeps a log of operations.
- ☐ **C.** the part of the operating system that oversees what programs are selected for execution.
- ☒ **D.** a part of the processor that holds a bit pattern.

8. Do all processor chips use the same machine language?

- ☒ **A.** No. Machine language is an engineering decision that is unique to each processor family.
- ☐ **B.** No. Each individual processor chip has its own unique machine language.
- ☐ **C.** Yes. Machine language is a fundamental characteristic of all processors.
- ☐ **D.** Yes. An International Committee designed the machine language that all processors now use (after the year 2000).

9. Assemblers and compilers usually translate a source program into machine instructions contained in what type of file?

- ☐ **A.** include file
- ☐ **B.** binary file
- ☒ **C.** object module
- ☐ **D.** hidden file

10. What type of program uses software to imitate the hardware operation of a particular type of processor?

- ☐ A. imitator
- ☐ B. assembler
- ☐ C. translator
- ☒ D. emulator

The number you got right:

Percent Correct:

Letter Grade:



If you have returned here from another page, or have re-loaded this page, you will need to click again on each of your choices for the grading program to work correctly. You may want to press the SHIFT KEY while clicking to clear the old answers.