



on the MIPS Programming Model

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. When a register is **loaded** what happens?

- ☐ A. The bits of the register are set to all ones.
- ☐ B. The bit pattern in the register is copied to a location in memory.
- ☐ C. A bit pattern at a memory location is copied to the register. The memory is set to all zeros.
- ☒ D. A bit pattern at a memory location is copied to the register. Memory is not changed.

D

2. When a register is **stored** what happens?

- ☐ A. The bits of the register are set to all ones.
- ☒ B. The bit pattern in the register is copied to a location in memory.
- ☐ C. A bit pattern at a memory location is copied to the register. The memory is set to all zeros.
- ☐ D. A bit pattern at a memory location is copied to the register. Memory is not changed.

B

3. By software convention, the machine instructions of a program are put in a designated

section of memory. What is this section called?

- ☐ A. Data segment.
- ☐ B. Stack segment.
- ☐ C. Program segment.
- ☒ D. Text segment.

4. What general purpose register is permanently set to thirty-two zero bits?

- ☒ A. \$0
- ☐ B. \$1
- ☐ C. \$31
- ☐ D. \$32

5. What part of the processor chip performs arithmetic and logical operations?

- ☐ A. CPU
- ☒ B. ALU
- ☐ C. ROM
- ☐ D. PCI

6. Where do the operands for an arithmetic machine instruction come from?

- ☐ A. Both operands are registers.
- ☐ B. Both operands come from memory.
- ☐ C. One operands must be a register, the other one may be memory or a register.

- ☒ **D.** One operand must be a register, the other may be a register or may be part of the machine instruction.

7. What is an **opcode**?

- ☐ **A.** The part of a machine instruction that designates the data to be used.
- ☒ **B.** A bit field, part of a machine instruction, that designates a machine operation.
- ☐ **C.** The part of the processor chip that performs decoding operations.
- ☐ **D.** The part of a machine instruction that is used as data in an operation.

8. There are 32 general purpose registers. So a machine instruction must use a bit field of what size to designate a register?

- ☐ **A.** 3
- ☐ **B.** 4
- ☒ **C.** 5
- ☐ **D.** 16

9. What is the **mnemonic name** of a register?

- ☐ **A.** A register number like \$0 or \$31.
- ☐ **B.** A name that helps you remember the hardware characteristics of the register.
- ☐ **C.** The bit pattern that designates the register in a machine instruction.
- ☒ **D.** A name like \$s0 that helps you remember the conventional software uses for the register.

10. What, in order, are the three steps of the machine cycle?

- ☒ **A.** fetch, increment, execute.
- ☐ **B.** Execute, fetch, increment.
- ☐ **C.** Fetch, exectue, increment.
- ☐ **D.** increment, fetch, execute.

grade quiz

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.