1. Which one of the following MIPS32 instructions do not have a separate unsigned version?

   (a) `add`
   (b) `sub`
   (c) `lw`
   (d) `lb`

   Answer: (c)

2. In the MIPS32 instruction `bc1t`, the `c1` refers to

   (a) comparison
   (b) coprocessor
   (c) one's complement
   (d) two's complement

   Answer: (b)

3. In a computer system, the user cares primarily about X, while the sysad primary cares about Y.

   (a) X = memory, Y = CPU
   (b) X = CPU, Y = memory
   (c) X = program latency, Y = throughput
   (d) X = CPU frequency, Y = cycle time

   Answer: (c)

4. Which of the following are factors related to program performance that are affected by the compiler? Select all that apply.

   (a) benchmark
   (b) cycles per instruction
   (c) number of executed instructions
   (d) clock frequency

   Answer: (b), (c)

5. Due to increased carbon dioxide, what has happened to global food production?
   (House points question, optional)

   (a) decreased yields overall due to droughts
   (b) decreased yields overall due to heat waves damaging crops
   (c) increased yields for fruit trees but decreased yields for food crops
   (d) increased yields overall for food crops as well as fruits and vegetables

   Answer: (d)