Faculteit FEW, Divisie W&I — Tentamen Computerorganisatie

Vrije Universiteit — 5 juli 2000

Every correctly answered question yields a maximum of 1 point. The final grade is the sum of the points 1 + (thus between 1 and 10 inclusive).

1. What is the definition of the Hamming distance between two code words in an error-correcting code? What Hamming distance is necessary for an error-correcting code and why?

2. Draw a clocked D latch. Why is this circuit useful?

3. Convert the following infex formula to reverse Polish.
   (a - b + c x d) /(e + f)

4. The IBM PC bus is synchronous. The VME bus (among others) is asynchronous. Explain the difference between a synchronous bus and an asynchronous bus.

5. A 300 MHz Pentium II is more than 2x as fast as a 150 MHz Pentium I. How do you explain this?

6. Give the optimal IJVM code for the following Java statement:
   i = 2 * (j -3 + k)

7. The SPARC uses a 'register window' to win speed. With help from a drawing, explain this concept.

8. What is a handle in Windows NT? What is it used for?

9. What is the essential difference between a trap and an interrupt?