

Proposed solutions to the questions that require a numeric answer:

Exam example 1

Question 8.

The average CPI for computer M1 is 1.6, and for M2 it is 2.5.

Question 12.

- (a) Number of bits used for the byte offset = 5
- (b) Number of bits used for the set (index) field = 1
- (c) Number of bits used for the tag = 26

Exam example 2

Question 8.

The average CPI for computer M1 is 1.6, and for M2 it is 2.5.

Question 13.

- (i) The clock cycle time for a non-pipelined processor will be 1250ps (i.e., the sum of all stages).
- (ii) The clock cycle time for a pipelined processor will be 350ps (i.e., the length of the longest stage).