Câu 1.

000000\_10000\_10001\_10000\_00000\_100000

1. Functional Unit: Instruction memory, registers, mux, ALU

000000\_10000\_10001\_10000\_00000\_100000

2. 010000\_10000\_10001\_0000000000000101

mux = 0

read register 1: 16 => read data 1 = 100

read register 2: 17 => read data 2 = 200

write register: 17

mux = 1

ALU = 105

mux = 0

write data = 105

3. 100011\_10001\_10000\_0000000001100100

mux = 0

read register 1: 17 => read data 1 = 200

read register 2: 16 => read data 2 = 100

write register 2: 16

signal extend : 100

mux = 1

ALU = 300

address = 300

read data = 2019

write data of data memory = 100

write data of registers = 2019

4. 101011\_10001\_10000\_0000000001100100

mux = 0

read register 1: 17 => read data 1 = 200

read register 2: 16 => read data 2 = 100

signal extend : 100

mux = 1

ALU = 300

address = 300

write data of data memory = 100

5. 000100\_10000\_10001\_0000000000000000

mux = 0

read register 1: 16 => read data 1 = 100

read register 2: 17 => read data 2 = 200

signal extend : 100

mux = 1

ALU = 300

address = 300

write data of data memory = 100

Câu 2:

1. 150 + 150 + 10 + 150 + 10 + 150 = 620

2. 150 + 150 + 150 + 10 + 150 = 610

3. 150 + 150 + 150 + 150 + 10 + 200 = 810

4. 150 + 150 + 10 + 150 + 200 = 660

5. 150 + 150 + 10 + 150 + 10 = 480