EMBEDDED SYSTEMS [6/9 credits course]

THEORY
8 T/F questions: 0.5 points for right answers, -0.25 points for wrong ones, and 0 for no answer
3 open questions: up to 2 points for right and complete answers
Available time: 60 minutes

C4uC
1 C4uC exercise: up to 12 points for right and complete solutions
Available time: 120 minutes

Name:

THEORY: TRUE or FALSE?

1) An embedded system is always designed to be as *general-purpose* as possible.

2) To exploit a *Digital Signal Processor* it is needed a specific compiler.

3) The Intel 8051 model used in the homelab has only 2 input/output ports.

4) It is possible to use floating-point arithmetic also on processors without a *Floating Point Unit*.

5) About WSN homelab: the notation *install.ID* is used to assign an ID to the target node.

6) Development kits are useful only for FPGA-based development.

7) TIVA board used in the homelab contains an ARM core.

8) Granularities used for active and passive roles of the time are always the same.

THEORY: OPEN QUESTIONS

1) Describe the main *Processors Technologies* and their differences.

2) Describe UMA (*Unified Memory Access*) and NUMA (*Not UMA*) systems and their differences.

3) Describe the concept of *Time-to-Market* and its relationship with embedded systems design.