

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 much low cost as possible.
- 2) An embedded system is always designed to satisfy only functional requirements.
- 3) A functionality is implemented in HW if described in C and executed by means of a soft-processor described in VHDL.
- 4) To exploit a specific *General Purpose Processor* it is needed a specific compiler.
- 5) About WSN homelab: the notation *install.ID* is used to assign an IP address to the target node.
- 6) Development kits are not useful for FPGA-based development.
- 7) Sensor nodes used in the WSN homelab contain an ARM core.
- 8) A *scratch pad* memory is invisible to the compiler (as a cache memory) .

THEORY: OPEN QUESTIONS

- 1) Describe the different *Processors Technologies* and highlight their differences.
- 2) Describe the different techniques used to manage *Interrupts* and highlight their differences.
- 3) Describe the most common *Active Temporizations* and highlight their differences.