/20

Project and Report Grading Sheet

Individual Mark **(2 Marks/each student)**

Students should demonstrate complete understanding of any part of the code/HW regardless if they have written it themselves or their partner(s). Student must answer any question related to the code/HW or explain portions of the code when asked to.

Student Name: _____ ID. _____ Section: _____ Grade: _____/2
Student Name: _____ ID. _____ Section: _____ Grade: _____/2
Student Name: _____ ID. _____ Section: _____ Grade: _____/2

Group Readiness and Preparation for Demo **(1 Mark)**

√		Grade
	Students can easily navigate their code and show the evaluator what they want quickly	1

Hardware Part **(3 Marks)**

√		Grade
	The circuit is properly connected with correct H/W design choices, **the wires are tidy**	/0.5
	The buttons when pressed respond smoothly and quickly (no delay, no multiple attempts for the button to work)(e.g. debouncing in HW/SW or similar)	/0.5
	LCD is working (lights up, something shows on the screen, even if wrong)	/1
	Demonstrate full functional code on H/W	/1

Software Part **(9 Marks)**

√		Grade
A/D programming and data processing		
	Correct A/D configuration	/0.5
	Correct equations (transfer functions) for each of the three sensors	/1.5
	Correct and **efficient** A/D channels multiplexing and operation	/0.5
System and algorithm processing		
	Continuous processing of the readings in the background even if in manual mode	/0.5
	Student implemented manual override mode	/0.5
	Core rule-based algorithm for switching the pumps on/off (including frost alert, abnormal temperature, and pH level override	/2
	Efficient approach for dealing with the arising floating point numbers	/1
Other H/W and peripherals programming		
	Using H/W timer for the 1.5 seconds frost alarm LED	/0.5
Proper SW techniques and documentation		
	Using proper coding techniques (modular programming, cblocks, macros, code reuse when possible, code safety, interrupts)	/1
	Functional comments	/1

If the evaluator or instructor suspects that the project has been plagiarized or commissioned by a 3rd party on behalf of the student, the student/group will be reported for investigation. If found guilty, the strictest penalties will be sought according to UJ laws and regulations.

Project Report (5 Marks)

	Report Formatting	
	Page numbers, Sections and Subsections, Figure and Table numbering and Captions, correct spacing and text justification, professional fonts	/1
	The report is presented in sound English and technical language	/0.5
	Report Flow	
	Introduction and System Description: Detailed specification of the system and its subsystems One system flowchart	 /0.5 /0.5
	Hardware System Define system inputs/outputs, justify your H/W configuration choices Circuit schematic	 /0.5 /0.5
	System Testing and Results Present the complete methodology which you have undertaken to perform unit testing, system integration, and the final overall test Which test cases you used and why did you choose them? Do they cover all possibilities? What results did you get?	 /0.5 /0.5
	Conclusion: brief summary of the project, role of each student in the project, major obstacles faced	/0.5