

I. IDENTIFICATION DATA

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| Thesis title: | Universal solar powered water quality monitoring IoT device and notification system |
| Author's name: | Catherine Kanama |
| Type of thesis : | master |
| Faculty/Institute: | Faculty of Electrical Engineering (FEE) |
| Department: | Dpt. of Microelectronics |
| Thesis reviewer: | Ladislava Černá |
| Reviewer's department: | Dpt. of Electrotechnology, FEE |

II. EVALUATION OF INDIVIDUAL CRITERIA

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| Assignment | ordinarily challenging |
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| Fulfilment of assignment | fulfilled |
| The assignment was fulfilled completely. | |

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| Methodology | correct |
| The whole problematics was unjointed to suitable parts. Correct components with good features were chosen. Unfortunately, the design from the point of view of reliability couldn't be verified (only limited operation time and absence of final box). | |

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| Technical level | B - very good. |
| Technical level of the presented work is very good. In the source code, there is no highlighting of own and foreign code. | |

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| Formal and language level, scope of thesis | B - very good. |
| Text is on a good language level. Nevertheless, some terms are used improperly and passive together with the first person narrative is used. | |

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| Selection of sources, citation correctness | A - excellent. |
| All of used sources are referred. Sometimes the form of citation in brackets is combined with text reference (namely when the results of foreign work are referred to). | |

III. OVERALL EVALUATION, QUESTIONS FOR THE PRESENTATION AND DEFENSE OF THE THESIS, SUGGESTED GRADE

Whole work is both well-structured and described. The emphasis is laid on the component choice, possibilities are discussed and compared. The comparison of used solution with the existing one is performed theoretically only, thus the operational reliability and performance cannot be deeply evaluated, but it is evident that presented approach is the cheap alternative with many positive features. Especially the intended purpose of the work (observing the water quality for avocados growing) demonstrates well the possibilities of IoT implementation and its penetration to daily use. The weakness of the work is the short operation time of the equipment and missing operation in real conditions (or conditions simulating the real ones).

There are a few questions and notes for discussion:

- Which parts of the code is written by the author (which libraries, etc.)?
- The used box is only the provisional one because due to coronavirus situation no 3D printer was available for the author. Is there any design of the intended 3D printed box? It is not presented in the work.



THESIS REVIEWER'S REPORT

- There are also the passwords apparent in the source code. Maybe it is for the study purposes only and they are only generic ones, but it is the common praxis to replace them by the asterisks in the code description.
- Which taste of water using Table 2 is valid for zero (or close to zero) TDS level?

The grade that I award for the thesis is **B - very good**.

Date: **17.6.2020**

Signature: