Unit 19: Application of data logging

Student Name: **Teacher:** **Date:**

Assessment Objective	Pass	Merit	Distinction
AO1 ***Investigate an application of data logging***	Candidates will identify the purpose of a data logging application and list the main hardware and software used. They will describe briefly how the data logging is carried out and state what data is collected. They will list some of the advantages of data logging in this situation.	Candidates will describe the purpose of a data logging application and the hardware and software used. They will describe how the data logging is carried out, including: • what data is collected • how data is collected • where data is stored • how it is analysed. They will describe advantages and disadvantages of data logging in this situation.	Candidates will describe fully the purpose of a data logging application and the hardware and software used. They will describe how the data logging is carried out, including: • how sensors are used • what data is collected • how data is collected • where data is stored • how it is analysed They explain the advantages, disadvantages and limitations of using data logging to meet the needs of this situation, making clear comparisons with alternative methods.
AO1 NOTES			AO1: P M D
AO2 ***Investigate the hardware and software used in data logging***	Candidates will identify the main differences between dedicated data loggers and sensors attached to PCs through interfaces. They will describe one example of each. They will describe examples of at least four different types of sensor and give an example of an application where each might be used, stating clearly the purpose of the application and the data being monitored.	Candidates will describe the main differences between dedicated data loggers and sensors attached to PCs through interfaces. They will describe one example of each giving an appropriate use for each. They will describe examples of at least five different types of sensor and for each: • give a brief overview of how the sensor works • describe one application where the sensor might be used, stating clearly the purpose of the application and the data being monitored • state whether or not the sensor needs to be calibrated by the user	Candidates will explain the main differences between dedicated data loggers and sensors attached to PCs through interfaces. They will describe one example of each giving an appropriate use for each, with reasons. They will compare the advantages and disadvantages of the two types of system. They will describe examples of at least six different types of sensor and for each: • give a description of how the sensor works • describe one application where the sensor might be used, stating clearly the purpose of the application and the data being monitored • state whether or not the sensor needs to be calibrated by the user They explain the purpose and processes of calibration and describe how at least one type of sensor can be calibrated.
AO2 NOTES			AO2: P M D

Overall grade awarded for this unit: **PASS** **MERIT** **DISTINCTION** (Circle ONE grade) **Signature:** _____

Student Name: **Teacher:** **Date:**

Assessment Objective	Pass	Merit	Distinction
AO3 ***Set up and carry out an investigation (or investigations) using data logging***	Candidates choose at least one appropriate sensor to carry out a simple investigation. They connect the equipment. They set the period and interval of logging and obtain some results. They state the purpose of the investigation, write about the method they used and comment on the results they find. The results are displayed as a list of raw data.	Candidates choose appropriate sensors to carry out an investigation or investigations monitoring at least two different physical variables. They connect the equipment. They set the period and interval of logging and obtain some results. They save their results and carry out some analysis to summarise their findings. They describe the purpose of the investigation(s), how the investigation(s) was carried out, how they analysed the results and describe their results.	Candidates choose appropriate sensors to carry out an investigation or investigations monitoring at least three different physical variables. They connect the equipment, and check the calibration of at least one sensor to ensure accuracy. They set the period and interval of logging and obtain some results. They save their results and carry out a detailed analysis to summarise their findings. They describe in detail the purpose of the investigation(s), how the investigation(s) was carried out and how they analysed the results. Their description of how the investigation(s) was carried out includes details of procedures followed to ensure precision and reliability of results. They produce a report, illustrated with charts/graphs and tables, detailing their findings.
AO3 NOTES			AO3: P M D
AO4 ***Evaluate data logging activities***	Candidates give at least one advantage and one disadvantage of using data logging equipment in their investigation. They describe at least one measure they had to take to ensure health and safety. They comment briefly on the accuracy of their findings.	Candidates describe several advantages and disadvantages of using data logging equipment in their investigation(s). They explain any advantages, disadvantages and limitations of some of the equipment they used. They comment on the accuracy and reliability of their findings. They describe clearly any health and safety issues they had to consider whilst carrying out the investigation(s) and any measures they took in response to these issues.	Candidates give a comprehensive evaluation of using data logging equipment in their investigation(s), considering the purpose of each investigation and alternative methods that could have been used. They explain any advantages, disadvantages and limitations of the particular equipment they used. They give an evaluation of the accuracy and reliability of their findings. They explain any health and safety issues they had to consider whilst carrying out the investigation and any measures they took in response to these issues.
AO4 NOTES			AO4: P M D

Overall grade awarded for this unit: **PASS** **MERIT** **DISTINCTION** (Circle ONE grade) **Signature:** _____