Faculty of Engineering Student name:

H14POD Error & Data Analysis Laboratory Assessment (Provisional marking scheme)

A title page including the project title Name+student ID **(1)**, Title+formatting**(1)**	/2
Short summary one paragraph (one paragraph) Explain what the aim of the report is ..... **1**. Explain what is done in the report ..... **1**. Explain the result..... **1**	/3
An introduction to the laboratory (one paragraph) One paragraph + concise use of English.....**2** Introduce COR with an equation.....**1** All units and variables defined.....**1** Mention that experiment and theory are used.....**1**	/5
Justify measurement technique (Why did you use it?) .....**4** Describe four errors.....**4** Give each error a quantitative error with justification.....**2**	/10
Describing the measurement method (describe problems). Diagram of measurement method or photograph.....**4** A full list of apparatus used.....**3** Detailed point by point reproducible description of method.....**3**	/10
Describe how measurement error could be reduced. Four points to be mentioned, give reason for each point.....**8** Use of numbers in justification..... **2**	/10
Main conclusions (one paragraph) Concise English.....**1** Summarize errors which influenced measurement..... **2** Explain what was found out..... **1** Give value of COR.....**1**	/5
Plots Plotted experimental data in the report.....**2** Labels and units must be on ALL graphs or 0 will be awarded. Plotted simulated data (matlab+excel).....**2** Labels and units must be on ALL graphs or 0 will be awarded. A screen shot.....**1**	/5
Matlab Code Performance **-3** for hard wired input (i.e. no interactive use of input functions) **-6** for minor error preventing running, (typically a typo) **-12** for major algorithmic error resulting in wrong answer	/18
Matlab Code Presentation **-3** for brief comments, **-6** for no comments	/6
Matlab Code Output -6 No units or labels.	/6
Matlab animation. High quality 3D = full marks, 2D graph=5, no graph=0 Award points for creativity	/10
Excel sheet presentation The file must be clearly laid out so it can be understood at a glance.....**4** Data sheets must be labeled.....**2** Use of color to highlight.....**2** Comments to explain what is going on.....**2**	/10
MSExcel Analysis Graph of experimental data + raw data with units and labels.....**2** Determine the COR of the experimental data in the spreadsheet with some type of statistics or fitting.....**2** Graph of dynamic simulation + raw simulated data .....**3** Comparison of simulated and experimental data.....**3**	/10