Ownership of Material - Each group is to assess and evaluate the items below. The majority of this material can be found in your text book. Each group will give a short 10 minute discussion of their particular topic identified at a time to be identified. Address items such as advantages, disadvantages and uncertainty where appropriate. A very short brief writeup must be submitted – it need not be very formal but rather just a synopsis of what was done so that the task can be acknowledged as completed.

801A  Describe a strain gage and identify applications that use this device
801B  Describe several different displacement measuring devices
801C  Describe general techniques for signal amplification and attenuation and the use of OpAmps in instrumentation and signal conditioning
801D  Describe several different pressure measuring devices
802A  Describe several different flow measuring devices
802B  Describe different filtering effects including higher order filters
802C  Describe load devices such as load cells, proving rings and torque measurements
802D  Describe time constants and their effects in terms of measurement of dynamic phenomena
803A  Describe circuits for integration and differentiation and explain why they have similar problems that are observed in numerical processing
803B  Describe several different temperature measuring devices
803C  Describe basic pump characteristics such as efficiency and performance