# Spark Ignition Engine Lab

Student Name

Date

**Figure 1a.** Measuredtorque versus crankshaft speed for the spark ignition engine at fully open throttle.

[copy and paste your figure 1a here]

**Figure 1b.** Brake power and total power versus crankshaft speed for the spark ignition engine at full throttle. The markers indicate the experimental measurements. The black line represents the total theoretical power available, based on the Otto cycle using the air-standard model at the same conditions as those measured in the experiment.

[copy and paste your figure 1b here]

**Figure 1c.** Thermal efficiency versus crankshaft speed, comparing the measurements and theory. The theory is based on the Otto cycle using the air-standard model at the same conditions as those measured in the experiment.

[copy and paste your figure 1c here]

**Figure 1d.** Work rate terms in the energy balance of the engine versus crankshaft speed, as based on the experimental measurements.

[copy and paste your figure 1d here]

**Figure 1e.** Mean effective pressure acting on the piston head versus crankshaft speed, as based on the experimental measurements.

[copy and paste your figure 1e here]