Raw Data Sheet

Student Name: _____

Team members:
1.- _____ 2.- _____

3.- _____ 4.- _____

Instructor: _____

Following the guidance from your instructor, perform the required tasks and record your observations.

Table 1.- Disk

Hanging Mass (units)	Hub Diameter (units)	Disk Mass (units)	Disk Diameter (units)
$m =$	$D_{\text{hub}} =$	$M =$	$D =$

Table 2.- *Frequency* for various trials

	Trial 1	Trial 2	Trial 3	Trial 4
f				

Note: Remember to divide f by 4 to obtain RPM – refer to page 65 of the lab manual.

Introduction

With your own words, state the purpose of the lab.

Analysis

Torque

Make a diagram to explain where the force producing the torque is being applied. Include your measurements and appropriate units.

Calculate the magnitude of the torque and make a simple diagram to show the direction of the torque.

Angular acceleration

Calculate the average rotation rate of the disk, in radians per second.

Use the average rotation rate and the appropriate kinematic equations to determine the angular acceleration of the disk.

Moment of Inertia

Use the values obtained for the torque and the angular acceleration to calculate the disk's moment of inertia; include the appropriate units.

Compare the value of the moment of inertia with the value for an homogeneous disk of the same mass and diameter.

Angular Momentum

Determine the magnitude of the disk's final angular momentum (right after torquing has been stopped).

Make a simple diagram to show the direction of the disk's angular momentum in relation to the direction of the torque applied.

Conclusions

Write a brief reflection that summarizes the lab exercise, in particular, your results –be specific.