



**EXPERIMENT NO. 6**

**Objective:**

To measure the support reactions for a variety of configuration of simply supported beam.

**Apparatus:**

Simple supported beam apparatus, Hanger and weights, Meter rod.

**Summary of Theory:**

Theory of the Experiment includes the following topics.

- Reactions & Types of Reactions
- Load & Types of Load
- Beams & Types of Beams

**Procedure:**

1. Set the Beam apparatus on a horizontal surface.
2. Set the digital balance weight at zero.
3. Apply a loads at different points and measure the readings
4. Take a set of at least five readings of increasing value of load and then take readings on unloading as well.



**Observations and Calculations:**

Least Count of the meter rod = \_\_\_\_\_ mm

Effective length of beam (L) = \_\_\_\_\_ mm

No. of Obs.	Effective Load-W (N)			Experimental values		Theoretical values		% error
	$W_1$	$W_2$	$W_3$	$R_A$ (N)	$R_B$ (N)	$R_A$ (N)	$R_B$ (N)	Th - Pr/Th x100
1								
2								
3								
4								
5								
6								

Name: \_\_\_\_\_

Reg. # \_\_\_\_\_

Date:

**Report:**

The laboratory report should contain the following:

1. Plot of curve between Load and Reaction .Calculate the slope of the graph.
2. Hand calculations showing all results under procedure above.
3. A discussion of factors affecting the results of the experiment.
4. Practical Applications