

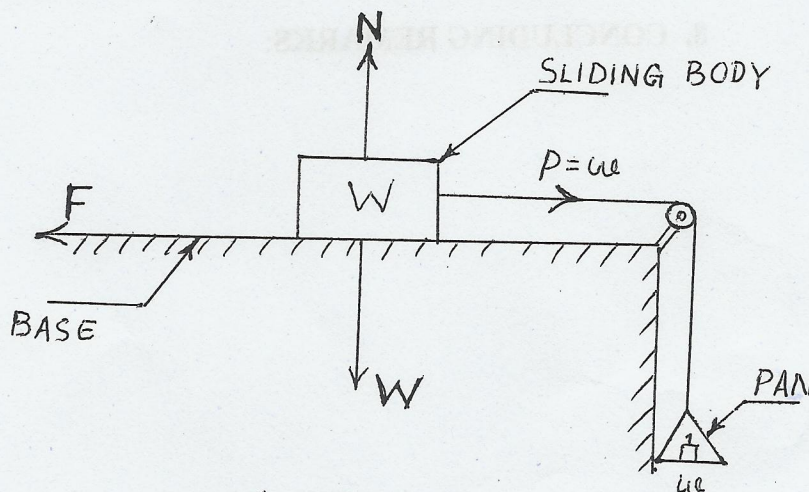
DEPARTMENT OF MECHANICAL ENGINEERING
KIIT UNIVERSITY
BHUBANESWAR
INSTRUCTION SHEET
APPLIED MECHANICS & DYNAMICS LAB.
COEFFICIENT OF FRICTION APPARATUS

1. AIM:

To determine the coefficient of friction between different sliding surfaces.

2. EQUIPMENT REQUIRED.

- 2.1 Sliding pairs
 - a) Glass vs Glass
 - b) Glass vs G.I
 - c) Glass vs Rough G.I.
- 2.2 Dead Weights.
- 2.3 Effort pan.



(FIG)

3. THEORY.

The 'coefficient of friction' (COF), also known as a 'frictional coefficient' and symbolized by the Greek letter (μ), is a dimensionless scalar value which describes the ratio of the force of friction between two bodies and the force pressing them together.

$$\begin{aligned} \text{The 'coefficient of friction' } (\mu) &= F/N \\ &= w/W \end{aligned}$$

Where,
F= Force of Friction
N= Normal reaction
w= Effort applied at the string end.
W=Weight of the body.

5. PROCEDURE:

- 5.1 Clean both the contact surfaces.
- 5.2 Place the Tray on the glass base.
- 5.3 Put some dead wt. on the tray.
- 5.4 Now put dead wts. on the weighing pan till the static tray with dead wt. starts to slide.
- 5.5 Repeat the same procedure for the rest of the sliding pairs.

6 OBGERVATION:

Sl no	Sliding Surfaces in contact	(W) in kgf	(w) in kgf	μ
1	Glass vs Glass			
2	Glass vs G.I			
3	Glass vs Rough G.I			

7. CALCULATION:

8. CONCLUDING REMARKS:

