

## Angle of Repose.

Angle of repose is defined as the angle of the inclined plane with horizontal such that a body placed on it is just begins to slide.

By definition  $\alpha$  is called the angle of repose.

In limiting condition  $F = mg \sin \alpha$

and  $R = mg \cos \alpha$

So  $\frac{F}{R} = \tan \alpha$

$\therefore \frac{F}{R} = \mu = \tan \theta = \tan \alpha$  [As we know  $\frac{F}{R} = \mu = \tan \theta$ ]

Thus the coefficient of limiting friction is equal to the tangent of angle of repose.

As well as  $\alpha = \theta$  i.e. angle of repose = angle of friction.

