

# EXPERIMENT # 01:

To find the shear strength of soil using direct shear test.

## APPARATUS:

- ① Direct shear box apparatus
- ② Loading frame.
- ③ Dial gauge.
- ④ Tamper
- ⑤ Balance.
- ⑥ Aluminum container
- ⑦ Spatula.
- ⑧ Straight edge
- ⑨ Proving ring.

- \* → Put the upper grating on stone and loading block on top of soil.
- \* → Measure the thickness of soil specimen.
- \* → Apply the desired normal load.
- \* → Remove the shear pin.
- \* → Attach the dial gauge which measures the change of volume.
- \* → Record the initial reading of the dial gauge and calibration values.
- \* → Start the motor, take the reading of the shear force.

\* → Take volume change reading till failure.

\* → Add 5 kg normal stress  $0.5 \text{ kg/cm}^2$  and continue the experiment till failure.

## PRECAUTIONS:

- ① Record carefully all the readings.
- ② Set the dial gauge zero, before starting the experiment.
- ③ Repeat the experiment for three times.