

Experiment 3

Test 1

The candidate will be expected to determine the Young Modules of the material of a metre rule by two separate methods.

1. Two metre rules, one of them labelled “A”.
2. Two 100 g masses [e.g. slotted masses]
3. One G-clamp.
4. Elastic band of appropriate size and strength to bind the masses firmly to the rule.
5. Set square.
6. Stop watch reading to 0.01 s.
7. Micrometer reading to 0.01 mm.

The candidate should be able to clamp the rule to the horizontal bench surface so that up to 93 cm is projecting.

The supervisor should ensure that at least one of the metre rules has a measurable but not excessive deflection when projecting by 93 cm and loaded at the end with 200 g. This rule should be labelled “A”.

Test 2

The apparatus is as for Test 1.