

## Practical Questions

### Vernier Caliper

1. Why is the slide caliper called a vernier caliper?

The slide caliper is called “Vernier Caliper” in honor of French Mathematician Vernier who invented the slide caliper.

2. When can you measure the zero reading?

We can measure the zero-reading when the two jaws are just in contact.

3. How will you determine the least count of the slide caliper?

We can determine the least count of the slide caliper by subtracting the value of one vernier scale division from the value of two main scale division.

4. How many decimal places can be measured with vernier caliper?

The three decimal places of centimeter can be measured with vernier caliper.

5. What are the advantages of using a slide caliper?

The advantages of using a slide caliper are accuracy, precision, calibrated and cheap.

### Hooke's Law

1. Is Hooke's law verified?

Yes.

2. How much is the load/extension ratio? Is it a constant?

The load/extension ratio is  $25 \text{ Nm}^{-1}$ . It is a constant.

3. What is the nature of load-extension graph?

The nature of load-extension graph is the straight line.

4. Find the spring constant.

Spring constant,  $k = 25 \text{ Nm}^{-1}$ .

### Static Friction

1. What is friction?

Friction is the force that opposes the motion of an object.

2. What is static friction?

The friction that acts on the object that are not moving is called static friction.

3. What is relation between the static friction and normal reaction of the surface on the body

The static friction is directly proportional to the normal reaction of the surface of the body.

4. Does the coefficient of friction depend on the area of the surface in contact?

No.

5. Does the coefficient of static friction depend on the weight of the body in the inclined plane method?

Yes.