

Department of Physics, IIT Kanpur

Enquiry nos: Phy/SB/Phy101/2013/02

Opening Date :21/08/2013

Closing Date: 4/09/2013

Subject: Purchase of experiments for Physics undergraduate teaching laboratory

We are interested in the purchase of a experiments for Physics undergraduate teaching laboratory. Note the experiments have to be quantitative, illustrate a concept with clarity, the experiment should allow significant student involvement in all process of the experiment, viz., noting readings, analysis and calculations, error analysis, the experiments should also have slight flexibility to allow for the possibility to modify the experiment slightly to demonstrate a closely related concept. The experimental setups have to be robust and the company has to provide continuous backup service and close interaction with the users.

We seek quotation for the following type of experiments

Expt1: Determination of moment of inertia of objects, possibly study of frictional losses through the setup, and changes in angular motion of the wheel under asymmetrical mass changes.

Expt. 2: Study of elastic and inelastic collisions on a linear air-track and study the conservations laws.

Expt. 3: Study of, natural and forced damped oscillations in a Pohl's pendulum, the phenomenon of resonance and study the phase difference between the driving force and the oscillatory system.

Expt. 4: Investigate the force between two current carrying wires in a current balance apparatus and measure the *permeability of free space*.

Expt.5 : Study induced EMF across a coil when a bar magnet oscillates through the coil and investigate the relation between the maximum induced EMF and velocity of the magnet.

Expt.6: Use a prism spectrometer to determine, the refractive index of a glass prism at various wavelengths, the dispersive power of a prism and the Cauchy's coefficients.

Expt.7: Study the phenomenon of precession of a gyroscope and determine the moment of inertia of a wheel in a simple gyroscope.

Expt.8: Measuring the magnetic field distribution in Helmholtz coil configuration using a hall probe and determine the e/m using a narrow beam electron tube.

Expt 9.: Measure the velocity of light in air and in a synthetic resin and determine the refractive index of the synthetic resin

Some additional apparatus

Additional spare E/M tubes for expt.8 (3 nos)

Light Barriers and counter (4 nos)

Cobra unit for digitizing experiments (3 nos).

We are a non-commercial organization. The experiments will all be used for teaching purposes only. We request the best price quotation following the specification of experiments outlined above. Please offer the best possible educational discounts to make your quotations competitive. In a sealed envelope please send the following:

1. Quotation with the best price offer inclusive all the terms and conditions.
2. All technical specs and documents adhering to the specifications and standards outlined above for the camera.
3. A list of place in India and where your experiments have been supplied.

Please arrange to deliver the above within the specified time to the following address:

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