



INDIAN ASSOCIATION OF PHYSICS TEACHERS








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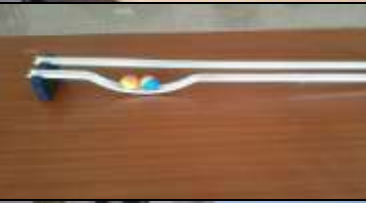

REGIONAL COUNCIL-6




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CONTENTS OF INNOVATION HUB


S.No.	Particular	Photo
1	<p>An-harmonic Oscillator It consists of a bar pendulum with a magnet and another magnet mounted on stand, with arrangements for restoring force measurements and dial.</p>	
2	<p>Angular Momentum Conservation A setup is developed using bicycle wheel with handles and tube less tyre and a rotating stand to demonstrate conservation of angular momentum.</p>	
3	<p>Coupled Oscillator It consists of two trips loaded with masses of brass to adjust the frequency. Spring is mounted on each to control the coupling.</p>	
4	<p>Demonstration of Bohr Orbits A metallic strip is mounted on a speaker in a circular shape. An oscillator is connected to speaker to setup stationery waves in the range of 20-100 Hz.</p>	
5	<p>Doppler Effect. An electronic buzzer of 3 K Hz, is mounted on a strip oscillators.</p>	
6	<p>Equilibrium with Magnets a) Six ring magnets are mounted on a plastic rod all repelling each other. b) 20 ring magnets mounted on balls floating in a tub.</p>	

7	<p>Importance of Curved Surface Hyperbolic surface is generated from a stretchable sheet fixed on a bicycle rim. Central point is pulled down. Rolling balls show spiral motion.</p>	
8	<p>Kundt's Tube Using PVC pipes 40 mm and 50 mm, rectangular shape fitting is made with 5 feet fixed length and 5-7 feet variable length. Electronic buzzer of 3 K Hz.</p>	
9	<p>Lissajous Figures Two bar pendulums of length 60 cm, coupled with mass 20-50 g, and oscillate in a plane. A lens connection between the pendulums at 90 degree show superposed motion. The image of a LED lamp on a screen shows lissajous figure.</p>	
10	<p>Lorentz Oscillator A light weight bar pendulum is suspended on a steel ball. It has all degrees of freedom. A magnet attached to the bottom and another at the stand.</p>	
11	<p>Manual Lift with 1/8 Effort Door pulleys are attached to the rooftop and a set of four pulleys attached to the pair of chairs. A rope connect the same at height of 8-10 feet.</p>	
12	<p>Maxwell's top A wooden disc of 10-12" has axil of 12" can spin by two hands.</p>	
13	<p>Measure Your Weight A rubber tube of a car is filled with water with a 5 mm PVC tube of 72" fixed on vertical wall. A 20"x20" wooden plank placed on tube.</p>	

14	<p>Motion on Inclined Plan An aluminum channel of 1" wide and 72" long has linear portion and a loop of Dia 12", mounted on wooden stand, with balls can roll.</p>	
15	<p>Magnetically Coupled Oscillator It consists of two steel scales mounted on a pillar with free ends loaded with masses. Permanent magnets are mounted on each to provide coupling.</p>	
16	<p>Mechanical Transmission Line 20 no. of 12" scales are mounted on a Steel tape of 2 Meter length hanged from a wall mounted.</p>	
17	<p>Plasma State A vacuum chamber of 5 " glass container having neon gas at low pressure. R F supply exciting the plasma in the chamber.</p>	
18	<p>Plasma Application A Tesla coil is used to generate R F supply and CFL lamp can lit.</p>	
19	<p>Rotation Dynamics A rotating platform is developed, using cycle parts.</p>	
20	<p>Reduction of Friction A friction less track is developed using air blower and aluminum gliders.</p>	
21	<p>Racing Track Two 1" aluminum channel are used 1 Meyer length.</p>	
22	<p>Solar Concentrator A flexible reflection sheet is mounted on a plastic bucket with a vacuum pipe. The radius of curvature can be controlled.</p>	

23	<p>Series of Pendulum</p> <p>A series of 6 rod pendulum are mounted on a long spring. Energy transfer in longitudinal and transverse modes is visible.</p>	
24	<p>Vibration Analysis of a System</p> <p>A vibrating comb with 12 fingers is mounted on a speaker. A signal generator 1-1k Hz with digital output is provided for analysis.</p>	
25	<p>Vortex Formation</p> <p>Two bottles of 2 liter each are connected through 5 mm hole.</p>	

- All demonstration equipments are proprietary items designed and developed for IAPT-RC-6.
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President
IAPT-RC-6