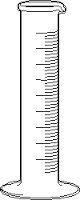
PHYSICS PRACTICAL EXAMINATION

SS 1



You are provided with a measuring cylinder, set of masses, thread and a liquid.

1. Measure and record the internal diameter d of the measuring cylinder.
2. Fill the measuring cylinder to half of its volume. Read and record the liquid level l₀.
3. Tie a mass m = 50g with a length of the thread and gently drop it into the liquid. Read and record the new level l of the liquid. Evaluate y = l - l₀.
4. Evaluate V = 0,785d²y
5. Repeat the procedure four more times, each time adding a mass of 50g. in each case, determine the total mass m dropped. Read and record the corresponding level l of the liquid. Also evaluate y and V.
6. Tabulate your readings in the space provided below.
7. Plot a graph of m on the vertical axis and V on the horizontal axis.
8. State two precautions taken to ensure accurate results
9. State Archimedes principle.
10. A block of wood of volume 2 X 10⁻³m³ is immersed in water. Calculate the upthrust on the block if its mass is 5 x 10⁻³Kg. [ g = 10m/s², density of water = 1 X 10³kg/m³]

PHYSICS PRACTICAL EXAMINATION

SS 2

You are provided with optical pins, a drawing paper, thumb pins, a rectangular glass prism and drawing board.

Using the diagram above as guide, carry out the following instructions.

1. Place the rectangular glass prism on a sheet of paper. Trace the outline ABCD of the prism.
2. Remove the prism. Draw a normal NP to meet face AB at O.
3. Draw a line MO such that it makes an angle I = 30⁰ with NO.
4. Fix two pins at points P₁ and P₂ on the line MO. Replace the prism on its outline.
5. Looking through face DC of the prism, fix two other pins at points P₃ and P₄ such that the pins appears to be on a straight line with the images of the pins at P₁ and P₂.
6. Remove the pins and the prism. Draw a line to join points P₃ and P₄ produced to meet face DC at Q.
7. Draw a line to join points Q and O.
8. Measure and record angle BOQ = e.
9. Evaluate Sin I and Cos e.
10. Repeat the procedure for I = 40⁰, 50⁰, 60⁰, and 70⁰ respectively. In each case, measure and record the corresponding value of e. also evaluate Sin I and Cos e.
11. Tabulate your readings
12. Plot a graph of Sin I on the vertical axis and Cos e on the horizontal axis, starting both axes from the origin.
13. Determine the slope
14. State two precautions taken to ensure accurate results.
15. State two examples of cases where total internal reflection is observable.
16. A converging lens formed a real image four times the size of an object placed 6cm from it. Calculate its focal length.