

GREENLAWNS HIGH SCHOOL
FINAL EXAMINATION YEAR 2017

SUBJECT : PHYSICS PRATICAL
TIME : 1 HOUR

CLASS : IX
MARKS : 80

NOTE: The first 10 minutes have to be spent in reading this paper & checking your apparatus. Use the hour at the end of these 10 minutes to perform your practical.

Write Aim, Observation, Calculation and Conclusion in you answer sheet. Do not copy the procedure. Do not use a pencil first and then go over it in ink while filling your observation table. Fill observation table with pen

AIM : To study the oscillations of a simple pendulum & to determine its time period & observe the variations in its time period with the length and amplitude of the pendulum.

Apparatus – A simple pendulum, a stand, metre scale, stop watch.

Procedure –

A) By changing the length of a pendulum.

- 1) Arrange the simple pendulum in its mean position using a stand.
- 2) Adjust the length of the pendulum i.e. from the point of suspension to the centre of the spherical bob (say 35 cm)
- 3) Use the given stop watch to record the time taken (t) by the pendulum for 20 oscillations & find the time period (T) of the simple pendulum.
- 4) Use the above procedure to find the time period of the pendulum by changing its length to 45 cm & 55 cm.

B) By changing the amplitude of oscillation :

Find the time period of the pendulum by increasing the amplitude of oscillations keeping mass & length of the pendulum fixed & compare the result with the previous recorded time for the same length & mass of the pendulum. Let the mass of the bob be 'm'. Do not measure it. Take the length of the pendulum 40 cm & amplitude of your choice in such a way that $a_1 < a_2 < a_3$

OBSERVATION

A) By changing the length of the pendulum.

Sr. no.	Length of the pendulum 'l' in cm	Time period for 20 oscillations 't' in sec	Time period of the pendulum 'T' in sec.
1			
2			
3			

B) By changing the amplitude of oscillations, keeping the mass & length of the pendulum constant

$$a_1 < a_2 < a_3$$

Sr. no.	Amplitude 'a' in cm	Time period for 20 oscillations 't' in sec	Time period of the pendulum 'T' in sec.
1	a_1		
2	a_2		
3	a_3		