ASUMBI GIRLS HIGH SCHOOL

POST -MOCK 1

AUGUST/SEPTEMBER

2022

**232/3**

**PHYSICS PP3 MS QUESTION 1**

**PART A**

d)

|  |  |  |  |
| --- | --- | --- | --- |
| **D (cm)** | **Time for 20**  **oscillations (S)** | **Periodic time (T)**  **(S)** | **T2 (S2)** |
| **15** | 94.00 | 4.70 | 22.09 |
| **20** | 70.91 | 3.65 | 12.60 |
| **25** | 60.60 | 3.03 | 9.18 |
| **30** | 53.43 | 2.67 | 7.13 |
| **35** | 47.87 | 2.40 | 5.76 |
| **40** | 44.62 | 2.23 | 4.87 |

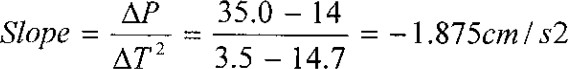
½ each 1mk for all ct 1mk for all correct

e) See graph attached.

P2

L1 A1 S1

f)



g) 33cm→6.25 (S2) T = 6.25

= 2.5 S

**PART B**

|  |  |  |
| --- | --- | --- |
|  | **Time for 10 rev** | **T** |
| 1. | 5.92 | 0.592 |
| 2. | 6.10 | 0.610 |
| 3. | 5.87 | 0.587 |

T Ave = 0.596S

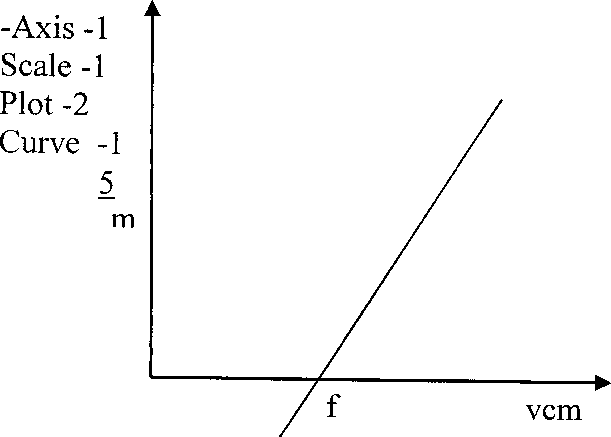
W = 2π = 10.543 rad S-1

T

1. F = 20 ± 0.1.

e)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **U (cm)** | **30** | **35** | **40** | **45** | **50** | **55** |
| **V(cm)** | 58 | 47.0 | 42.0 | 46 | 34.5 | 32.5 |
| **M =** *v*  *u* | 1.93 | 1.34 | 1.05 | 1.02 | 0.69 | 0.59 |



* 1. Slope = l

f

* 1. Use the x intercept When M = 0, v = f.

Or reciprocal of slope =f.

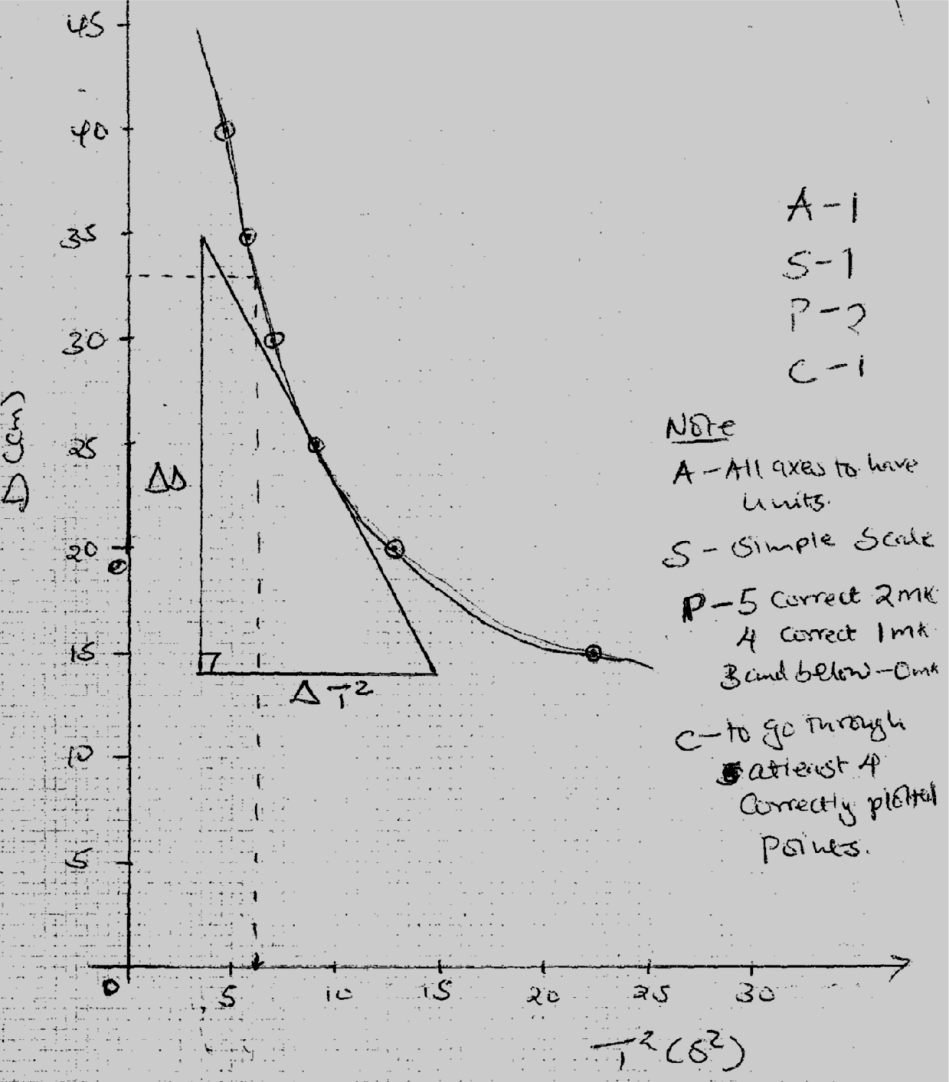
**PART B**

1. (i) Ammeter, I = 0.25 A
   1. Voltmeter, V = 1.35 V
   2. K =

v  *K*  1.35 5.4

l 0.25

d)



e)

