

**FORM FOUR PAPER 3**

**PHYSICS P3**

**PRE-MOCK 1 2021**

**MARKING SCHEME**

**QUESTION 1**

i) a) 2.24cm 0.1

H=

b) 14.9cm

ii) 24.7g

|  |  |
| --- | --- |
| **Volume of water in cm3/ml** | **Height h (cm) (** |
| 10  20  35  45  50  65 | 2.7  5.1  6.4  8.8  10.0  13.6 |

Each ½mk total 3mks (3mks)

v) Graph paper

vi) Gradient =

=

=

= 4.231cm2 without unit ½mk

vii) L= 86cm

viii) H

= 14.9

= 14.9

= 149 5.9168 – 4.231

= 14.9

= 25.11842

ix) Density = =

= 0.9833g/cm3

**QUESTION 2**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **u(cm)** | 30 | 35 | 40 | 45 | 50 | 55 |  |
| **v(cm)** | 15.0 | 14.0 | 13.5 | 12.9 | 12.5 | 12.0 | 1mk each  Max 5 points |
| **m =** | 0.5 | 0.4 | 03375 |  |  |  | 1mk all correct |

6mks

iv) Graph paper :

Axes- well labelled quantity and units (1mk)

Scale – uniform, simple and accommodative (1mk)

Plotting – exact points or to 1small square

mk each max of 4 (2mks)

Line – should pass through majority of points with positive gradient (1mk)

v)Slope =

= =

0.1cm-1

vi) m =

= gradient

= 0.1

f = 10cm

**PART B**

i) E =1.5V(1mk)

ii) V = 1.14

I= 0.04A 0.1 (1mk)

iii) E = V + 1V

1.5 = 1.14 + 0.048 r

1.5 – 1.14 = 0.048

0.36 = 0.04r

R = = 9



