**PHYSICS PAPER 3**

**MARKING SCHEME**

**Question 1**

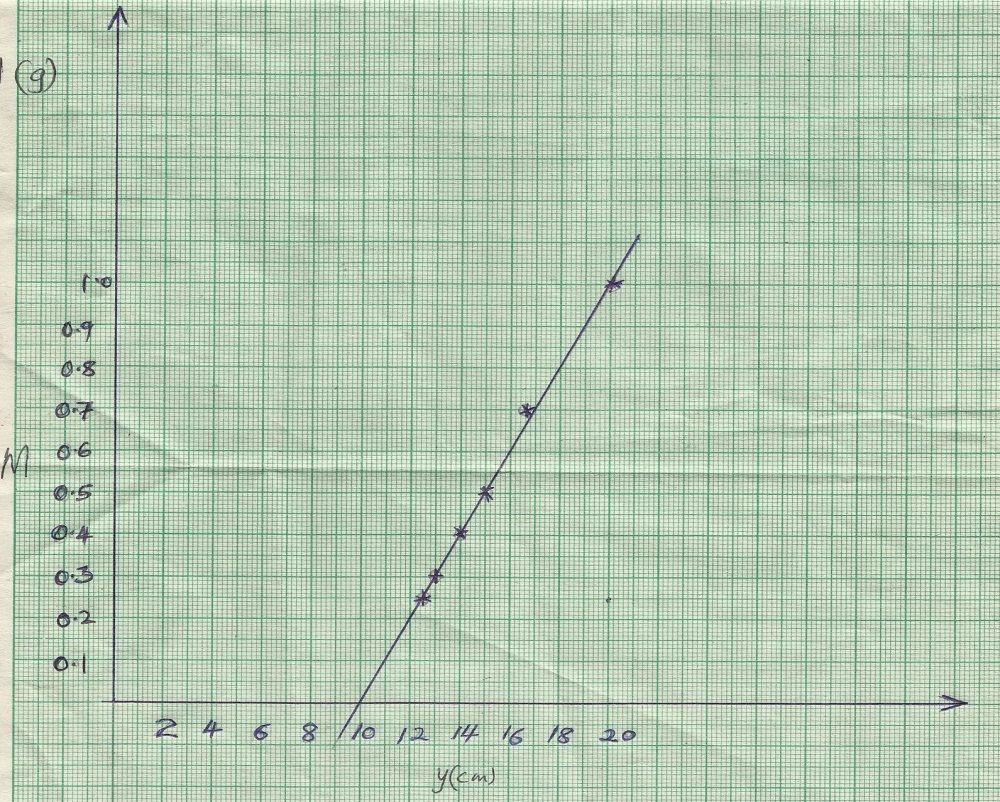
(b) d = 1cm (1 mk)

(f)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 50 | 40 | 35 | 30 | 25 | 20 |
| y(cm) | 12.5 | 13.33 | 14 | 15 | 16.6 | 20 |
| *h(cm)* | 0.25 | 0.3 | 0.4 | 0.5 | 0.7 | 1.0 |
| M= | 0.25 | 0.3 | 0.4 | 0.5 | 0.7 | 1.0 |

(5 mks)

g(i)



Axes 1 marks

Scale 1 mark

Plotting 2 marks

Line 1 mark

Gradient = 1 – 0.25 = 0.1

20 – 12.5

(ii) Slope, s of the graph.

Slope= =0.105 (3 mks)

(h)🗸 1🗸 1

**Part B**

J (i)

u1 =10.5 cm (1mk)

(ii)

u2 = 77.5cm (1mk)

iii) 🗸 1

iv) , =10.1775cm🗸 1

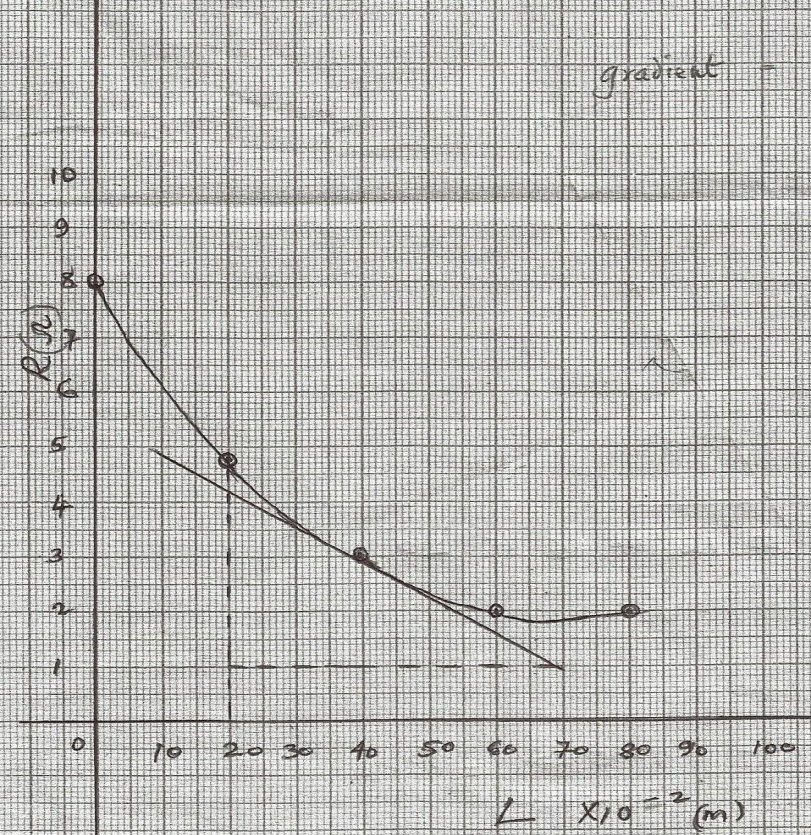
2 (i) V=…0.2V……………… I=…0.1A…………… (1 mark)

ii)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| L(cm) | 80 | 60 | 40 | 20 | 0 |  | 3mks  3mks  2mks |
| Ammeter reading I (A) | 0.15 | 0.2 | 0.2 | 0.25 | 0.3 | +0.1 |
| Voltmeter reading V (v) | 0.3 | 0.4 | 0.6 | 1.2 | 2.4 | +0.1 |
|  | 2 | 2 | 3 | 4.8 | 8 |  |

8marks

(iii)

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Gradient = ΔR = 4.2 – 1

ΔL 0.2 – 0.7

= -6.4

Axes 1 mark

Scale 1 mark

Plotting 2 marks

Line 1 mark

Iv)Slope**s** at Y=40. (3mks)



(v) D = …………………m🗸 1

p = 0.5  at Y=40cm substitution🗸 1evaluation🗸 1