**FORM 3 MWAKICAN PHYSICS PRACTICAL MARKING SCHEME**

1.

|  |  |  |  |
| --- | --- | --- | --- |
| LENGTH(L) | CURRENT(A) | VOLTAGE(V) | V/I |
| 0.1 | 0.75 | 2.20 | 2.93 |
| 0.2 | 0.5 | 2.30 | 4.60 |
| 0.3 | 0.35 | 2.40 | 6.86 |
| 0.4 | 0.25 | 2.45 | 9.80 |
| 0.5 | 0.2 | 2.50 | 12.5 |
| 0.6 | 0.15 | 2.55 | 12.75 |
| 0.7 | 0.1 | 2.65 | 17.67 |

III) AS L increases the ratio of V to I increases (1mk)

iv)d=0.30mm 1mk $A=πr^{2}$

=3.142(0.15)2 1mk

=7.065 x 108  1mk with correct units

v)-labelling axis 1mk

 -appropriate scale 1mk

 -plotting 6-7 pts 2mks

 3-4 pts 1mk

 1-2 pts 0 mk

* Graph is a straight line 1mk

Vi) v/I

 =5.6 1MK

L= 1.8/5.6

=0.32 A 1mk

(viii)slope=2.75 1mk

P=slope X A

=27.5 X 7.065x10-8 Ω 1mk



