KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

ALLIANCE GIRLS HIGH SCHOOL
232/1
PHYSICS
PAPER 3
MARKING SCHEME

SCHOOLS NET KENYA
Osiligi House, Opposite KCB, Ground Floor
Off Magadi Road, Ongata Rongai | Tel: 0711 88 22 27
E-mail:infosnkenya@gmail.com | Website: www.schoolsnetkenya.com

ALLIANCE GIRLS HIGH SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016

Paper 3(Practical)

MARKING SCHEME

---

1. (i)d=0.00035M (5 d.p) ½ mk

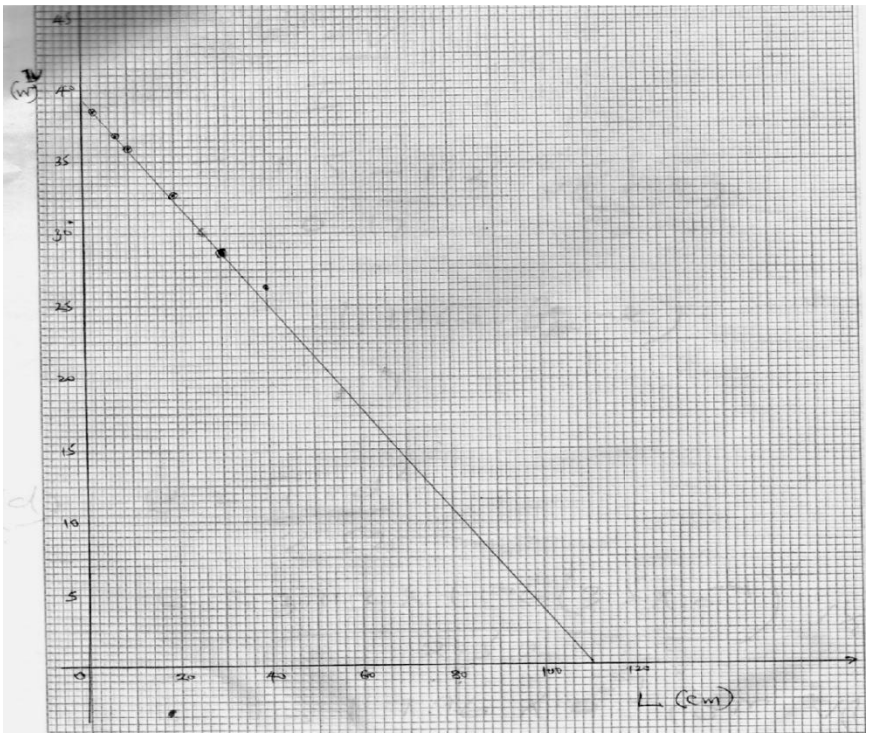
(ii) E=1.5±0.1 V (1 dp) (½ mk)

Tables 1-5mks

L(cm)	2.5	7.5	10.0	20.	30.	40.0
Pd(V)	0.70	0.80	0.90	1.05	1.15	1.20
I(A)	0.55	0.46	0.40	0.31	0.25	0.22
IV (watts)	0.3850	0.3680	0.3600	0.3255	0.2875	0.264
$X10^{-2}$	38.50	36.80	36.00	32.55	28.75	26.40

(a)(iii) Lo=110cm (students horizontal axis intercept correctly read) 1mk

(b)(ii)



©(i) V=1.30V√ (½ mk)

I=0.17A√(½ mk)

r = E-V / I

$= \frac{1.5-1.3}{0.17}$ √ (½ mk)

=1.17Ω√(½ mk)

(d) e= $\frac{\pi rd^2}{2.52}$

E= $\frac{3.142x1.176(3.5x10^{-4})^2}{2.52}$ √ (½ mk)

=$1.796x10^{-7}$Ωm √ (1mk)

(f) b= (6.00cm) or candidates value

Table 2

1^o	10	20	30	40
Y(cm)	4.3	4.2	4.0	3.9

(g) (i) Y average= $\frac{4.3+4.2+4.0+3.9}{4}$

=4.1cm√(½ mk)

(ii) $K=\frac{b}{y}=\frac{6.00}{4.1}=1.463$

2. Part A

(a) t =7.60cm √ ½ mk

W =2.43cm√ ½ mk

(b) (i) T=1.31cm √1mk

(ii) lWT=7.60x2.43x1.31

=24.19cm^3√ 1mk

©(i) X = 43.0cm √ ½ y=35.0cm√ ½ mk

(ii)m = 50x/y

= 50x43 =61.43g√1mk

35

(iii) density = $\frac{61.43}{24.19}$

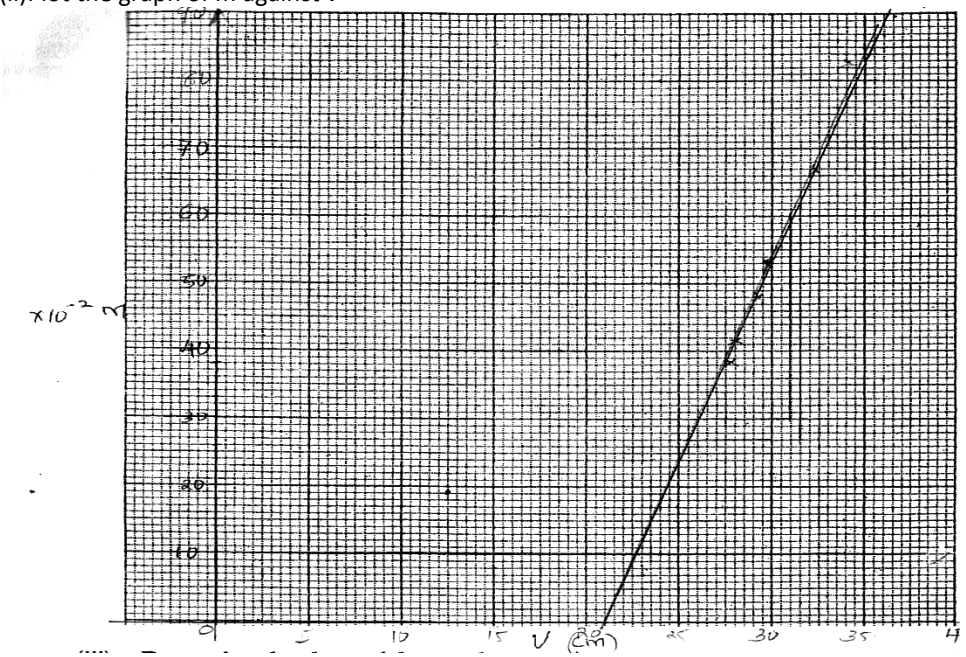
=2.54g/cm^3√ 1mk

(b)

L(cm)	100	95	90	85	80	75
U(cm)	72.3	67.0	60.8	55.4	47.7	41.0
V(cm)	27.7	28.0	29.2	29.6	32.3	34.0
$m=\frac{v}{u}$	0.3831	0.4179	0.4802	0.5343	0.6771	0.8293
X10^{-2}	38.31	41.79	48.02	53.43	67.71	82.93

\

(ii)Plot the graph of m against v



(iii) Determine the slope of the graph (3mks)

$slope=\frac{\Delta M}{\Delta V(cm)}$

$\frac{30x10^{-2}}{5}$

0.06/cm√ (with units)

Accuracy =0.05-0.06

(iv) Given that $\frac{v}{f}-1$

$$m = {}^{v}\!/_{f} - 1$$

$$\frac{I}{f} = slope \sqrt{1}$$

$$f = \frac{1}{slope}$$

$$f = \frac{1}{0.06}$$

=16.67cmV