Kenya Certificate of Secondary Education (K.C.S.E)

232/3

PHYSICS

PAPER 3

MARKING SCHEME

QUESTION ONE

Part A

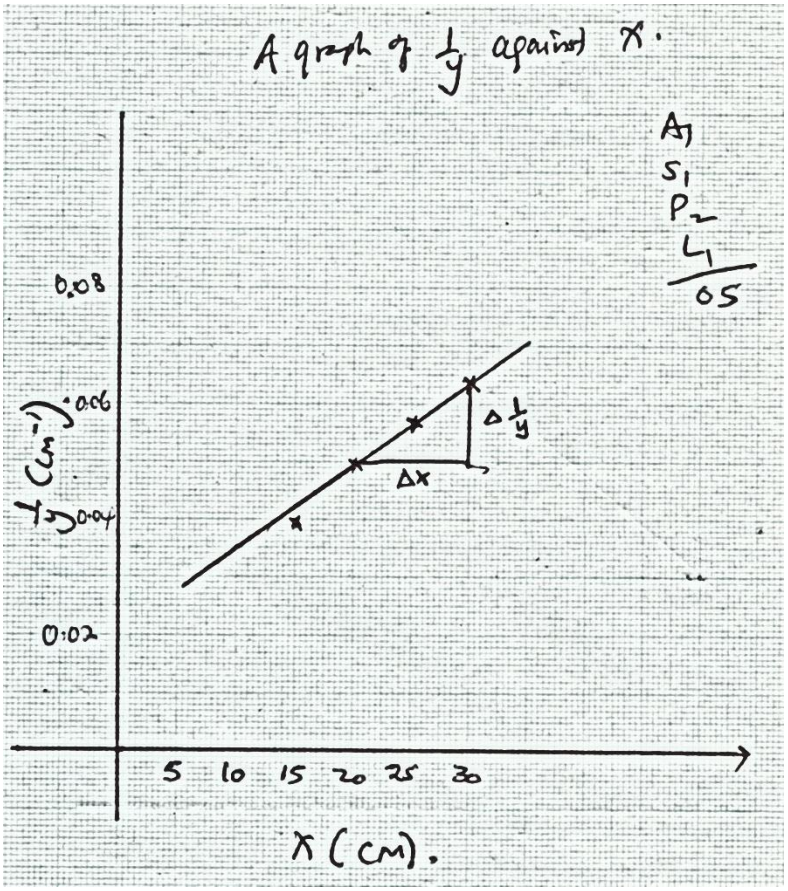
b) d = 20.0 1 cm✓1
d = 0.02 0.01m ✓1

d)

BD= Xcm	AC = Y (cm)	(cm^{-1})
30	16.0	0.0626
25	17.5	0.0571
20	20.0	0.0500
15	25.5	0.0392
10	28.0	0.0357
	4 marks for values within the range. Each value 1 cm	2 marks for correct calculation

(6 marks)

f) i)



ii) Slope =

= ✓1

= ✓1

= $0.013cm^{-2}$✓1

(Answer to have the correct units)

iii) M = ✓1

= 8.771cm✓1 (Answer with units)

iv) - M is approximately half of d✓1

d is approximately the focal length of the lens✓1

QUESTION TWO

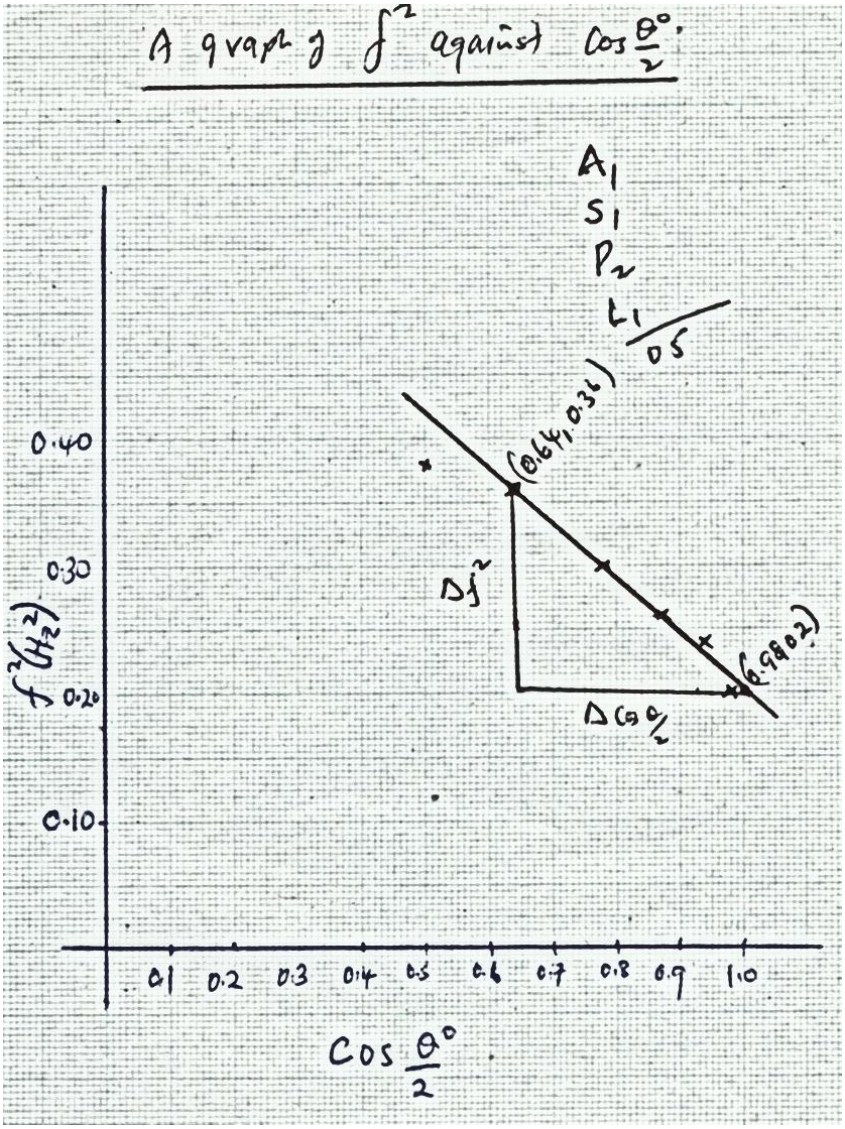
c) i) t = 4.51 2 seconds ✓1

ii) = 0.451Hz✓1

d)

Angle	Time for 10 oscillation t(s)	Frequency f =	$F_2(Hz^2)$	Cos
20^0	4.51	0.451	0.2034	0.9848
40^0	4.94	0.494	0.2440	0.9397
60^0	5.06	0.506	0.2560	0.8660
80^0	5.50	0.550	0.3025	0.7660
100^0	6.00	0.640	0.3600	0.6428
120^0	6.20 range 1 sec	0.620	0.3844	0.5000
	3 mks	1 mk for correct calculation	1 mk for correct calculation	2 mk(for correct calculation

e)



f) Slope =

= ✓

= ✓

= - 0.4706Hz^2✓ *(Answer with units)*

g) $f^2 =$ Cos

Slope =

L = ✓1

= ✓1

= 56.994✓1