

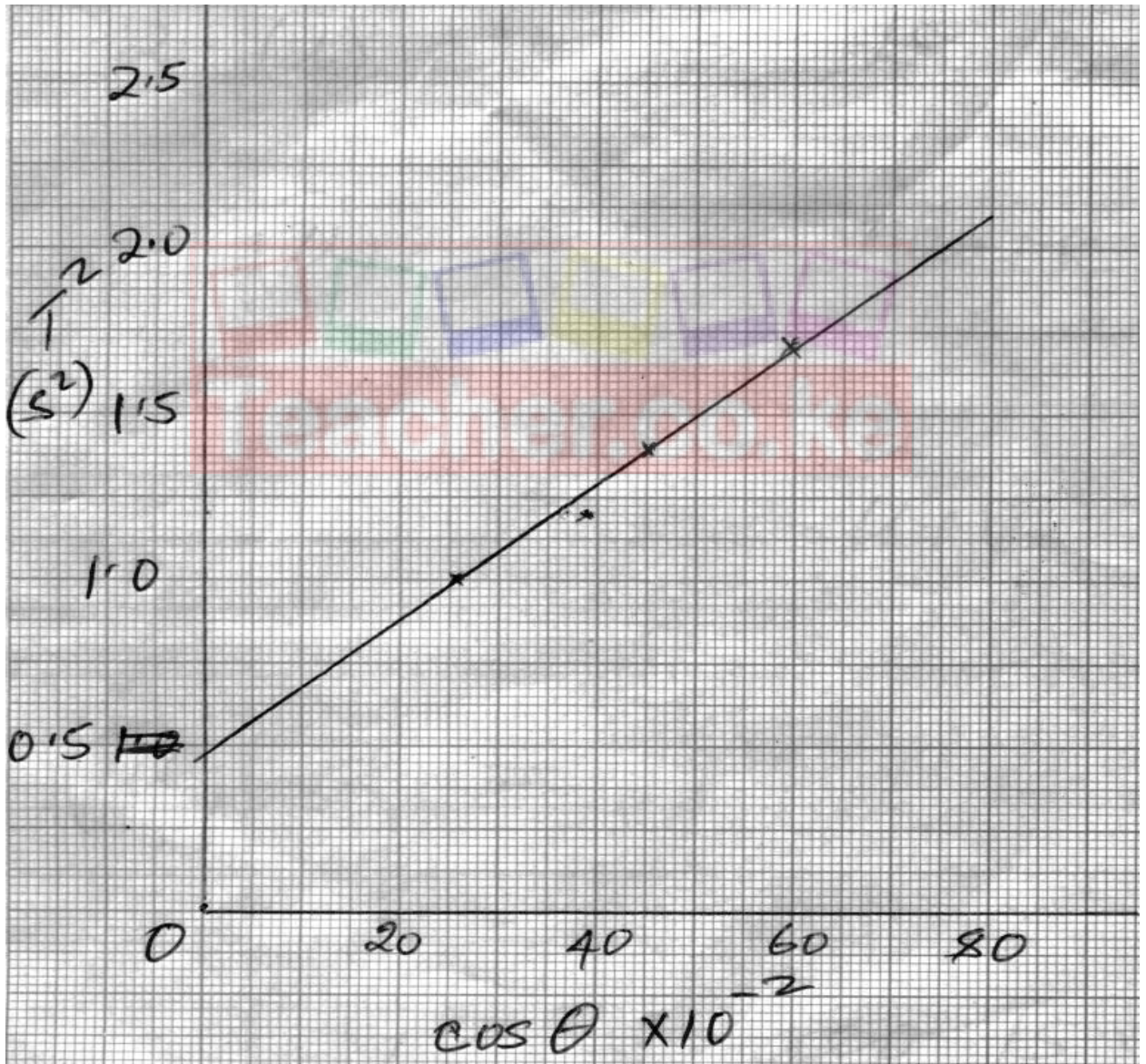
PHYSICS – PAPER 3

MARKING SCHEME

1. iii)

Length from A to B(cm)	80	76	72	68	64	60
Time for 10 oscillations(s)	10	11	12	13	14	15
Periodic time T(s)	1.0	1.1	1.2	1.3	1.4	1.5
$T^2(s^2)$	1.00	1.21	1.44	1.69	1.96	2.25
2θ	150°	138°	130°	108°	104°	96°
θ	75°	69°	65°	54°	52°	48°
$\cos \theta$	0.2588	0.3883	0.4226	0.5878	0.6157	0.6691

f)



2. i) $V = 15\text{cm}$ (use students values)
ii) $f =$ mark correct to (i) above

$$f = \frac{uv}{u+v}$$

b) i) $d = 15 \pm 0.2$

ii) $L = \frac{15 \times 15}{20 - 15}$
 $= \frac{225}{5} = 45$

iii) $X = \frac{L}{2f} + 1$
 $= \frac{45}{2 \times 15} + 1 = 1.5 + 1$
 $= 2.5$ (Mark according to students values)

