

232/3 PHYSICS PAPER 3 PRACTICAL

MARKING SCHEME

QUESTION 1.

- a)  $f = 120 - 180\text{mm}$   
 b)  
 c) Table

Distance from object to lens (mm)	1.2f	1.3f	1.4f	1.5f	1.6f	1.7f
X (mm)	680-740	635-695	585-645	553-613	540-600	530-590
Z (mm)	146-206	165-225	185-245	198-258	213-273	239-299
$Y = (X-Z)\text{mm}$						
$(Y-Z)^2 (\text{mm}^2)$						

- d)
- e) -Axes labeled with units 1mark.  
 - Suitable scale (simple, uniform and accommodative) all the point 1 mark.  
 - Points plotted within one small square  $\frac{1}{2}$ mark for maximum 0 + 4points 2mrks  
 - Straight line with positive gradient through at least. 3points 1mrk.
- f) i) – Reading from candidates graph 1mrk  
 - Accuracy (450-500)
- ii) – Reading from candidates graph 1mrk  
 - Accuracy (30,000-32500) 1mrk.
- g) Substitution  $\frac{1}{2}$ mark.  
 Correct evaluation  $\frac{1}{2}$ mark.

QUESTION 2.

g)

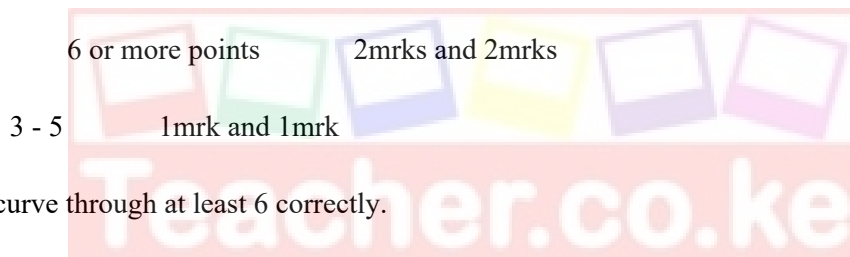
Time (mins)	0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
T <sub>1</sub> (°C)	100-88	69-73	63-67	56-60	51-55	47-51	45-49	43-47	41-45
T <sub>2</sub> (°C)	100-95	48-52	35-39	29-33	26-30	24-28	23-27	23-27	22-26

Time (mins)	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10
T <sub>1</sub> (°C)	40-44	38-42	37-41	37-41	36-40	36-40	35-39	35-39	34-38	34-38	34-38	33-37
T <sub>2</sub> (°C)	22-26	22-26	22-26	22-26	-	-	-	-	-	-	-	-

j) – Axes labeled with units                      1mrk

- Appropriate scale                      1mrk

- Plotting



-Smooth curve through at least 6 correctly.

- Plotted points                      1mrk and 1mrk.

k) i) – Reading from candidates graph                      1/2mark.

- Accuracy (0.1 – 0.4)                      1/2mark.

ii) – Reading from candidates graph                      1/2mark.

- Accuracy (3.6-4.0)                      1/2mark.