TEVETA

Technical Education, Vocational and Entrepreneurship Training Authority

DIPLOMA IN SCIENCE LABORATORY

LEVEL 4 – YEAR 1 EXAMINATIONS

FINAL INTEGRATED SUMMATIVE EXAMINATIONS

SITTING: JULY – AUGUST 2025

SUBJECT: PHYSICS TECHNIQUES 1

MARKING GUIDE

Centre Name	
Centre Number	

Candidate Examination Number	
Candidate NRC Number	
Candidate Signature	

Examiner Name	
Examiner NRC No	
Examiner Signature	

SCORE (Percentage)

MARKING GUIDE

S/N		ALLOCATED MARKS	ACTUAL MARKS
1	**Arrange the apparatus.**	2	
2	The distance u from the cross wire.	2	
3	The distance v from the screen to the lens.	1	
4	The focal length of the lens	1	
5	Different values	2	
6			

TABLE OF RESULTS

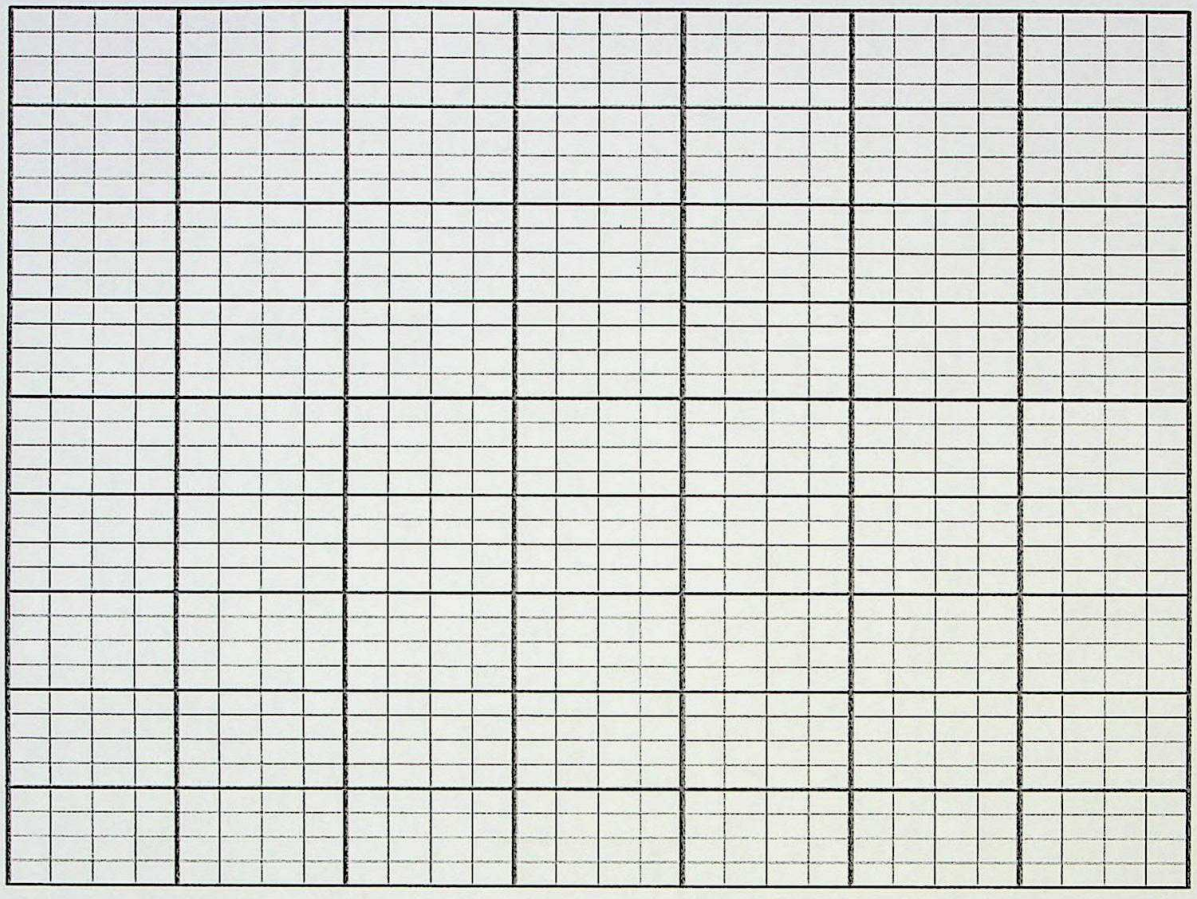
Trial Number	u(cm)	v(cm)	$\frac{1}{u}$	$\frac{1}{v}$

[12 Marks]

Data analysis

1. Compute values for $\frac{1}{u}$ and $\frac{1}{v}$

2. Plot a graph $\frac{1}{u}$ on the x axis and $\frac{1}{v}$ on the y axis



[8 Marks]

3. Determine the x and y intercepts of the line of best fit. **[4 marks]**

4. Calculate the mean focal length using the equation. **[3 marks]**

$$f = \frac{2}{\text{X intercept} + \text{Y intercept}}$$

[Total: 35 Marks]