

**ALTERNATIVE TO PHYSICS
PRACTICAL**

Date: 19 June 2025

Period: 8:30 AM - 10:00 AM



END OF TERM III EXAMINATIONS

MARKING GUIDE

GRADE : S 2

COMBINATION : O'LEVEL

DURATION: 1 H 30 MIN

MARKS:

.... /20

CAMIS(Theory+Practical):

...../40

INSTRUCTIONS

This paper is composed of **ONE** compulsory question

Non programmable calculator may be used.

Use only a blue or black pen

ATTEMPT ALL SUB QUESTIONS (20 MARKS)

a) i) Stop clock **(1mark)** clock, stop watch

ii) Metre rule **(1 mark)** measuring tape etc

b) Use the term random and systematic to complete the following table

Scenario	Type of error
i) Use of a ruler expanded due to heat	Systematic (1mark)
ii) Thermometer consistently reads 2 °C higher	Systematic (1mark)
iii) Voltage measurements affected by ambient temperature variations	Random (1mark)
iv) Balance with zero error before use	Systematic (1mark)
v) Multiple length measurements yield slightly different results	Random (1mark)

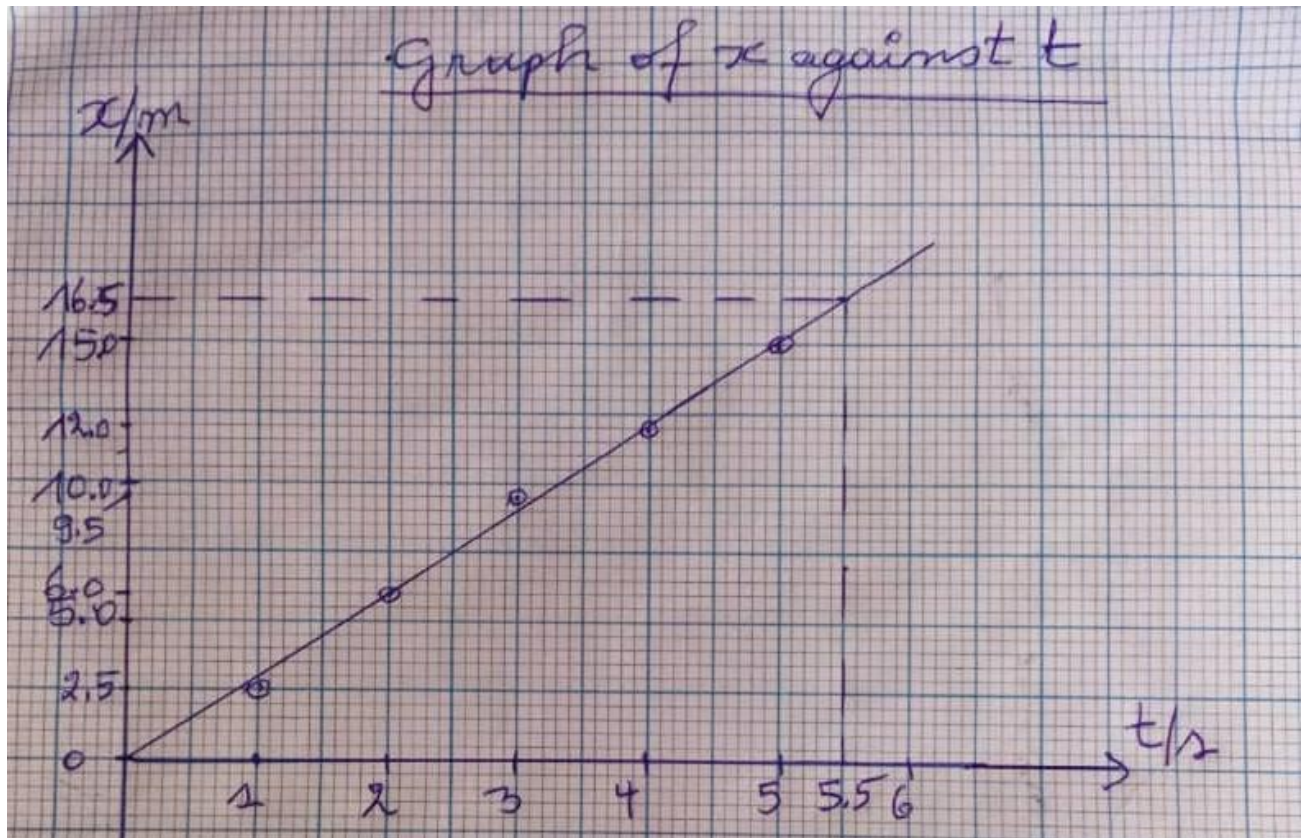
c) Graph of displacement x against time t

2 Labelled axes : **1 mark**

2 uniform scales: **2 marks**

6 Plotted points: **3 marks**

Best fit straight line : **1 mark**



d)i) Slope $S = \frac{\Delta x}{\Delta t}$ **(1mark)**

$$S = \frac{16.5-0}{5.5-0} \text{ m/s} = 3 \text{ m/s} \text{ **(1mark)**}$$

ii) Velocity or speed of the moving body **(1mark)** Reason: the unit of the slope **(1mark)**

e) From the graph, $x = 3t$ **(1mark)** initial position is $x_0 = 0$

$$\text{At } t=40 \text{ s, } x=3 \times 40 \text{ m} = 120 \text{ m} \text{ **(1mark)**}$$

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