EBS142P: General Physics Practical I - Quiz

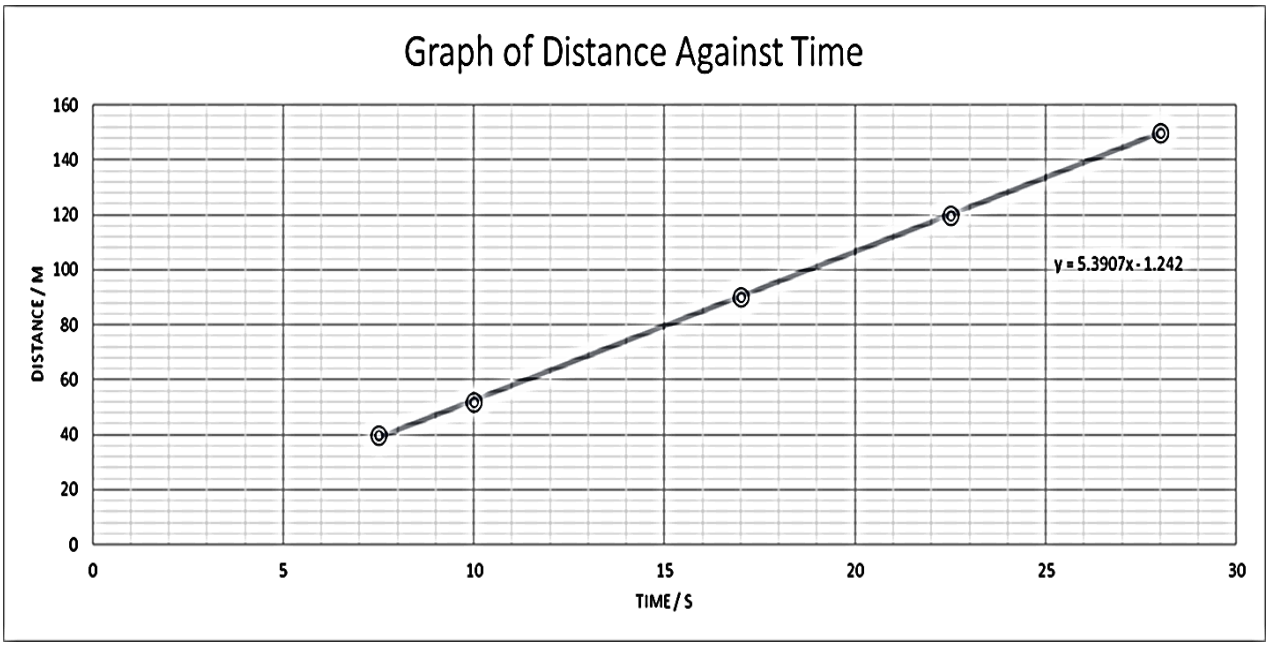
SCHEME

1. Students should copy and complete the table

Distance covered (OD/cm)	4.0	5.2	9.0	12.0	15.0
Actual distance (OD/m)	**40**	**52**	**90**	**120**	**150**
Time (t/s)	7.5	10.0	17.0	22.5	28.0

Score 1 mark each for the correct actual distance (OD/m). Total = 5 marks

2.



Use the following to score the graph:

An appropriate title provided - **1 mk**

Correct labeling of axes - **2 mks**

An appropriate scale chosen - **2 mks**

Any 3 points correctly plotted- **3 mks**

Line of best fit - **2 mks**

3. $slope\ M = \frac{change\ in\ actual\ distance}{change\ in\ time} = \frac{D_2 - D_1}{T_1 - T_2} = 5.3 \pm 0.1$m/s. - **(F1, S1, A1)**
4. Slope *S* represents the speed of the object. (accept velocity of the object) - **3 mks**
5. At 25 seconds the object travels 133 ± 1 m. **M1 (from graph) A2 (for correct answer)**
6. $speed = \frac{distance}{time}$ **F1**

   full length $= 20.5\ x\ 10 = 205\ m$ **A1**

   $5.3 = \frac{205}{time}$

   $time = \frac{205}{5.3}$ **S1**

   =38.7 ± 0.1 s. **A2 (1 mk for correct unit)**

The object will take 38.7 ± 0.1 s to reach the full length of the plane.