

ii)	time	0	130	260	390
	no. present	1.0×10^{20}	0.5×10^{20}	0.25×10^{20}	0.125×10^{20}

$$\text{Number decayed} = 1.0 \times 10^{20} - 0.125 \times 10^{20}$$

$$\text{After 390 days} = 9.875 \times 10^9$$

8.1.3 PAPER 3 (232/3)

The general performance was much better than the previous year. This was attributed to the fact that questions were straight forward and candidates did not require too much time to set up the apparatus. However there were a number of weaknesses noted by the examiners from the candidates.

Question 1

You are provided with the following:

- a metre rule
- an optical pin
- a metre rule or half metre rule
- one stand, one boss and one clamp
- a stop watch
- a G clamp
- a 100g mass
- a 30g mass
- some thread
- some cellotape.

Proceed as follows:

- (a) Using the clamp provided hold the metre rule firmly on the bench such that 90 cm of the rule projects from the edge of the bench. **The metre rule should be perpendicular to the edge of the bench and should remain in this position throughout the experiment.** Use a piece of cellotape to fix a pin at the other end of the metre rule. This will act as a pointer.