

In 2 (a) candidates failed to score full mark for the correct current. Some of the weaknesses noted were as follows:

- ◆ Failure to read the milliammeter scale. Some recorded more than 1 milliammeter while the full scale deflection (f.s.d) was 1.0 MA.
- ◆ Poor connections in the circuit could have resulted to high resistance leading to very low currents.

In (d) it was noted that candidates lost marks due to:-

- ◆ Inability to connect the circuit correctly and when they did the milliammeter reading was done incorrectly.
- ◆ Quite a number of candidates were unable to convert milliamperes MA to Amperes A.
- ◆ Other candidates failed to form correct required combinations hence wrong conversion eg. 0.45 mA to A some would write  $4.5 \times 10^4 \text{ A}$  instead of  $4.5 \times 10^{-4} \text{ A}$ .

In (e) the graph plotting, examiners observed that candidates were weak in the following skills.

- ◆ Incorrect labelling of the axes and choosing inappropriate scales which lead to incorrect plotting of points.
- ◆ Failure to recognize that the graph was a smooth curve and not a straight line. Many tried to force the graph into a straight line even when the trend of the plotted points was clearly not a straight line.

In 2(h) many candidates scored well in finding the average of  $f_1$  and  $f_2$ . However quite a number got difficulties in finding the sharp image of the candle. Many took their measurement of  $u$  from the edge of the candle instead of the centre. Others showed

weakness in substituting values in  $f = \frac{v}{1 + \frac{v}{m}}$  and evaluating the same.

In conclusion teachers need to note that many of the weaknesses noted by the examiners in the practical paper may be minimized by developing the practical skills throughout the 4 year course instead of doing so in the fourth year. This may be best achieved when students are exposed to the measuring instruments during the learning process.

Graph drawing skills are also perfected when such graphs are actually drawn by the individual students as they do their classroom experiments.

As stated in earlier reports, practical approach to teaching physical concepts should be emphasized all the time. Experience has shown that concepts in Physics are best understood when student participate in the learning process through experimental work.