PHYSICS 232/3 marking scheme

1. a) i) 10±0.2 mm√ ½
Value in(i) expressed in m√ ½
ii) 1.0 ± 0.2 cm √ ½
Value in (ii) expressed in m√ ½

b) iii) - Completing column t_1 with decreasing value in seconds √ ½
- Completing column t_2 with decreasing values in seconds √ ½
- Correct mean(column) √ 2, subtract ½mk for every wrong value.
- Correct period T (column) √ 2, less ½mk for each wrong value.
- Correct √T (column)√ 2 less ½mk for each wrong value.

iv) Scale √ 1
Plotting 5 pts √ 2 (less ½ mk for each wrong plotting)
Line √ 1
Axes √ 1

v) Slope expression √ 1
Answer with units i.e ($Sm^{-½}$) √ 1

vi) Correct substitution √ 1
Answer √ 1

vii) – Units ms^{-2} √ ½
- Acceleration due to gravity √ ½

2. A) c) Table.

Length (cm)	100	80	60	40	20	0
Voltage V(v)	0.2	0.3	0.4	0.6	1.0	1.6
Current I(A)	0.08	0.10	0.12	0.14	0.16	0.20

All values of V correct √ 2 ½ mks each wrong value, less ½ mark.
- All values of I correct √ 2 ½ each wrong value less ½ mk.
- All the values of V^2 correct √ 1mk less ½ mark for each wrong value to max of 1 mark.
- All values of R correct √ 1mk less ½ for each wrong value to a max of 1 mk.

d) Correct scale √ 1
Labeling both axes √ 1
Plotting √ 2
Smooth curve √ 1
Curve.

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e) Read values from the graph (must be shown) correct substitution √ 1
Answer with correct units √ 1

f) Power of the bulb as resistance increases √ 1

g) a) Resistance R= 10Ω√ 1
b) Correct circuit
with V in parallel
A in series. /√ 1
Value of A √ 1
Value of V √ 1
V/I ratio with units √ 1