Solar cells

Answer sheet Country code (2 letters) ☐ Student number (1-5) ☐

	Serial numbers: light source ☐ solar cell ☐	Marks
2.1a	Table of I as a function of r:	1.0
2.1b	Current $I_a =$ value $a =$ Include the calculation and graph on a separate sheet.	1.0
2.2a	Table of corresponding measurements of U and I:	0.6

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2.2b	Include graph of voltage as function of current on a separate sheet	0.8
2.3a	Current $I_{\mathrm{max}} =$ Document your reading on the graph from 2.2b.	0.4
2.3b	Range of values of U = Current $I_0 =$ $\eta =$ Include graph on a separate sheet.	1.2
2.4a	Power $P_{\mathrm{max}} =$ Include documentation on separate sheet.	0.5
2.4b	Resistance $R_{\mathrm{opt}} \pm \Delta R_{\mathrm{opt}} =$ Include documentation of method on separate sheet.	0.5
2.5a	$U_{\mathrm{A}} =$ $I_{\mathrm{A}} =$ $U_{\mathrm{B}} =$ $I_{\mathrm{B}} =$	0.5
2.5b	Include drawings of electrical diagrams on a separate sheet.	0.3
2.6	Include documentation for which of the four arrangements of the two solar cells yields the highest possible power on separate sheet. Include drawing of corresponding electrical diagram on separate sheet.	1.0

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2.7a	Table of I as a function of h: Include graph on separate sheet.	1.0
2.7b	Include sketches and symbols on separate sheet.	1.0
2.7c	Distance $r_1 =$ Current $I_1 =$ Current $I_2 =$ Current $I_3 =$	0.6
2.7d	Refractive index $n_w =$ Include documentation of method on separate sheet.	1.6
	Total	**12.0**