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

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|  | Serial numbers: light source solar cell  | Marks |
| 2.1a | Table of *I* as a function of *r*:

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 | 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*:

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 | 0.6 |
| **Answer sheet** Country code (2 letters) Student number (1-5) |
| 2.2b | Include graph of voltage as function of current on a separate sheet | 0.8 |
| 2.3a | Current $I\_{max}=$ Document your reading on the graph from 2.2b. | 0.4 |
| 2.3b | Range of values of $U$ =Current $I\_{0}=$ $η=$Include graph on a separate sheet. | 1.2 |
| 2.4a | Power $P\_{max}=$ Include documentation on separate sheet. | 0.5 |
| 2.4b | Resistance $R\_{opt}\pm ∆R\_{opt}=$Include documentation of method on separate sheet. | 0.5 |
|  2.5a | $U\_{A}=$ $I\_{A}=$$U\_{B}=$ $I\_{B}=$ | 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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| **Answer sheet** Country code (2 letters) Student number (1-5) |
| 2.7a | Table of *I* as a function of *h*:

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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** |