**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 value  Include the calculation and graph on a separate sheet. | 1.0 |
| 2.2a | Table of corresponding measurements of *U* and *I*:   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | | 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  Document your reading on the graph from 2.2b. | 0.4 |
| 2.3b | Range of values of =  Current  Include graph on a separate sheet. | 1.2 |
| 2.4a | Power  Include documentation on separate sheet. | 0.5 |
| 2.4b | Resistance  Include documentation of method on separate sheet. | 0.5 |
| 2.5a |  | 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*:   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  | |  |  |  |  |   Include graph on separate sheet. | 1.0 |
| 2.7b | Include sketches and symbols on separate sheet. | 1.0 |
| 2.7c | Distance Current  Current Current | 0.6 |
| 2.7d | Refractive index  Include documentation of method on separate sheet. | 1.6 |
|  | **Total** | **12.0** |