

| Question number | Answer   | Accept  | Reject | Marks |
|-----------------|--|---|--------|-------|
| 6 (a) (i)       | voltage = current x resistance;  | $V = I \times R$<br>Accept rearrangements                                     |        | 1     |
| (ii)            | Substitution and rearrangement (of correct equation);<br>Answer given to at least 3 s.f.;<br>e.g. $230 / 22$<br>$= 10.45 \text{ (A)}$ ( $\approx 10 \text{ A}$ )                                   | Ignore calculations of voltage or resistance<br><br>$10.5 \text{ A (= 10 A)}$ |        | 2     |
| (b) (i)         | Any two of:<br>MP1 As a safety device / reduces danger /reduces hazards;<br>MP2 In case of fault / short;<br>MP3 Idea of excessive current;<br>MP4 Prevents (wires or appliance) overheating/fire; | Ignore any reference to electric shock<br><br>More than 13A                   |        | 2     |
| (ii)            | MP1 Because total current (in motor and heater) is more than 2A;<br><br>MP2 A 2 A fuse would blow / melt / would need to be replaced / circuit would be broken;                                    | Accept reverse arguments  |        | 2     |

**Total 7 marks**