| Question Number | Answer | | Mark |
|---|---|---|---|
| **11(a)** | To limit the current (in the circuit)<br>**Or** To avoid overheating/melting (in the circuit) | (1) | **1** |
| **11(b)** | $\frac{I_W}{I_Z} = 1$<br>as current is the same around a series circuit.<br>$\frac{v_W}{v_Z} = 0.25$ (or 1:4)<br>as the (cross-sectional) area / $A$ is 4 times less for Z<br>**Or** as the (cross-sectional) area / $A$ is 4 times greater for W<br><br>(for MP3, allow an answer "<1" )<br>(Do not award MP2 if value for MP1 is incorrect)<br>(Do not award MP4 if value for MP3 is incorrect) | (1)<br>(1)<br>(1)<br>(1) | **4** |
| | **Total for question 11** | | **5** |