

**GCSE Physics A (Gateway)**  
**J249/04 Physics A P5-P8 and P9 (Higher Tier)**

**Question Set 10**

1 Energy is transferred at high voltages in the national grid.

(a) This house is near to a transmission line.



Explain why radio waves may be produced by the transmission line.

[2]

(b) Explain why it is more efficient to transfer energy at high voltages.

[2]

(c) The transmission line has a power loss of 6.156 kW.

Its resistance is 15.39  $\Omega$ .

Calculate the current in the transmission line.

Current = ..... A

[5]

**Total Marks for Question Set 10: 9**

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