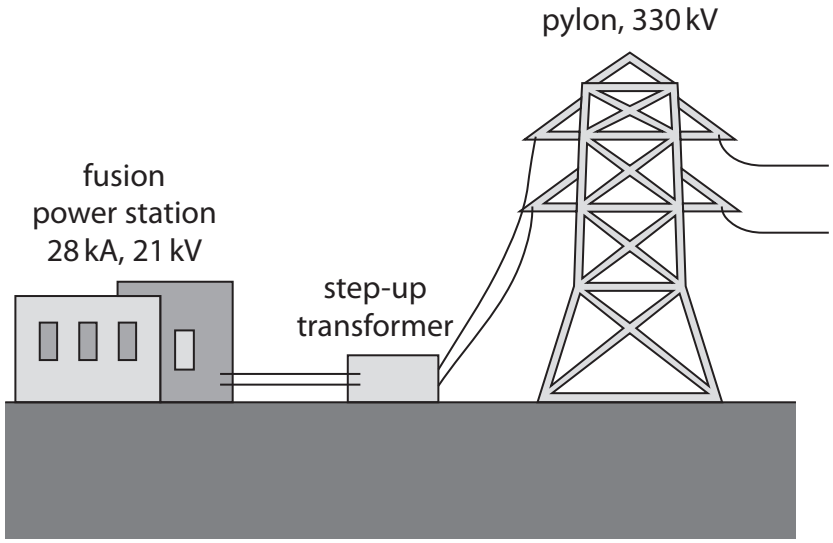
6 This is a question about a nuclear fusion power station.

(a) Explain what happens during nuclear fusion.

(3)

(b) The diagram shows how a fusion power station could supply the National Grid in the future.



(i) State the main method of energy transfer from the fusion power station generator to the primary coil of the step-up transformer.

(1)

(ii) The fusion power station could supply the input coil of the step-up transformer with a current of 28 kA at a voltage of 21 kV.

The output coil of the transformer has a voltage of 330 kV.

Assume the transformer is 100% efficient.

Calculate the current in the output coil of the transformer.

(3)

current = ... kA

(Total for Question 6 = 7 marks)