**6** The diagram shows a container of water.

The container has a heater in the bottom corner, a temperature sensor and a lid.



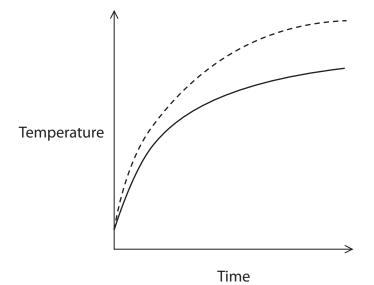
(a) Explain how a convection current is formed in the container.

You may add to the diagram or draw your own diagram to support your answer.

(4)


is full of water.

(b) The graph shows how the temperature sensor reading changes with time.
It shows the change in temperature when the container is full of water and when the container is empty.



Key
---- container empty
---- container full

(i) Describe the relationship between temperature and time when the container

(ii) Explain the differences between the two curves on the graph.

(3)

(2)

(Total for Question 6 = 9 marks)