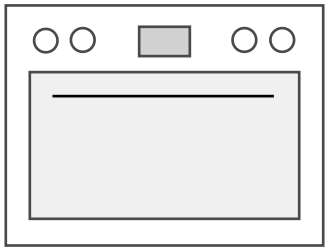
Do not write outside the box

1 The diagram shows a household gas oven. The oven is fan-assisted which means there is a fan inside which can be switched on or off.

The oven is heated by gas burners located at the bottom.



1 (a) (i) Explain how heat is transferred by convection from the gas flame at the bottom of the oven to food at the top of the oven. **[5 marks]**

Air particles / molecules / atoms at the bottom gain energy. [1]

Air particles / molecules / atoms move faster. [1]

Particles / molecules / atoms move apart. [1]

Air expands. [1]

Air becomes less dense. [1]

Warm / hot air rises. [1]

Care needed here. Note the following:
1. You cannot say particles move more when heated.

2. Do not talk about particles vibrating more when describing convection - more vibration is conduction.

3. Do not refer to particles expanding.

4. Remember it's not the heat that rises but the warm air.

1 (a) (ii) Food can be cooked on two shelves, one at the at the top and one at the bottom of the oven.

Suggest why the fan should be switched on when food is being cooked on the two shelves. **[1 mark]**

Circulate hot air or spread the hot air evenly. [1]

(Total 6 marks)

End