Question 1
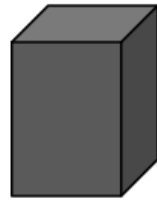
(a)   A block of metal of weight 240 000 N has sides of length 2 m, 3 m and 5 m. Calculate the maximum pressure the block can exert when it is resting on a level surface.

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_____

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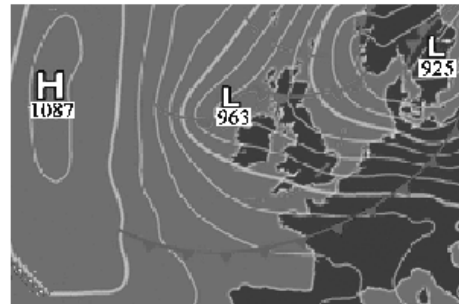## Question 2

(h)   The diagram is an Atlantic weather chart. Use the chart to predict **two weather conditions** that you might expect for Ireland.

Condition 1 _____

Condition 2 _____

Explain why low atmospheric pressure **causes one** of the weather conditions that you have given.

Explanation _____

_____
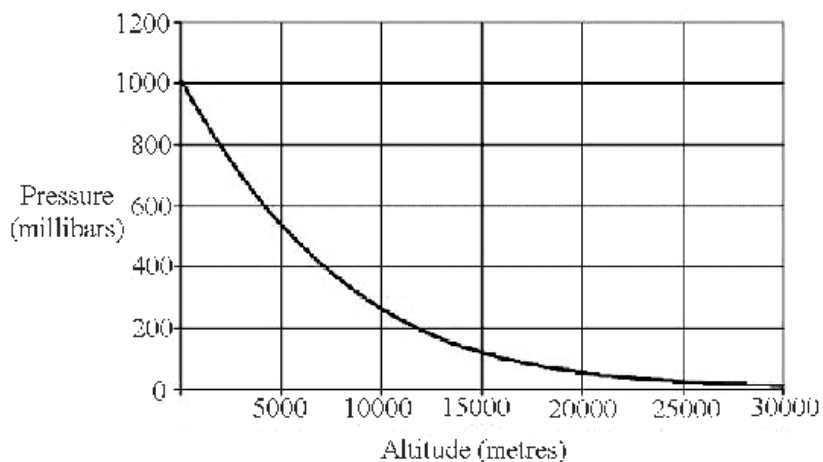
Question 3

(b)   The graph is of pressure *versus* altitude for our atmosphere.

(i) Look carefully at the graph of pressure *versus* altitude. Two conclusions
can easily be drawn: (1) that atmospheric pressure depends on altitude, and
(2) that the dependence of atmospheric pressure on altitude is not a direct
one. Explain why each conclusion can be drawn from the graph.   (6)

Pressure depends on altitude _____

Not direct _____

(ii) Give two reasons why atmospheric pressure is greatest near the earth's
surface.   (6)

Reason 1 _____

Reason 2 _____

(iii) What is the effect of increased pressure on the boiling point of water?   (6)

_____

Give a reason for your answer.

Reason _____

_____