



**Science Revised Syllabus
Junior Certificate
Higher Level**

**Past Exam Questions on
P Pressure**

Q7 Part (c) 2013

- (c) Barometers are used to predict weather.
What kind of weather would you expect if
the pressure was (i) high *or* (ii) low?

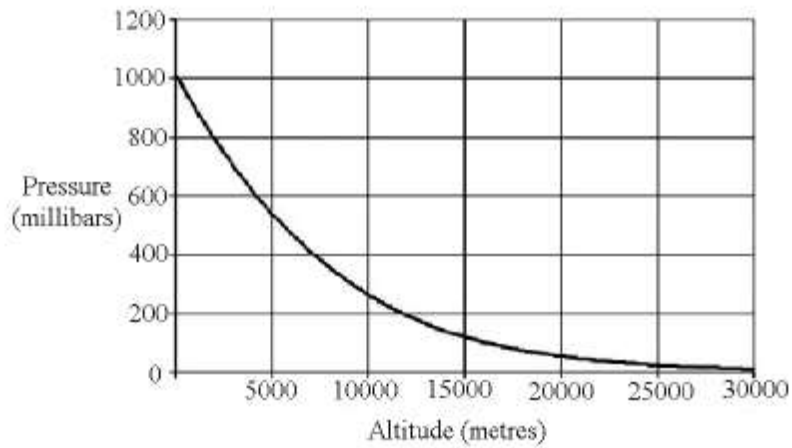
High _____

Low _____



Q8 Part (b) 2013

(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.

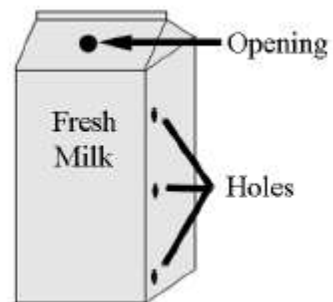
Reason _____

Q7 Part (f) 2012

- (f) Three holes were made in a carton of milk at the same time. From which hole will the milk pour out at the greatest rate? Give a reason for your answer.

Which? _____

Reason _____



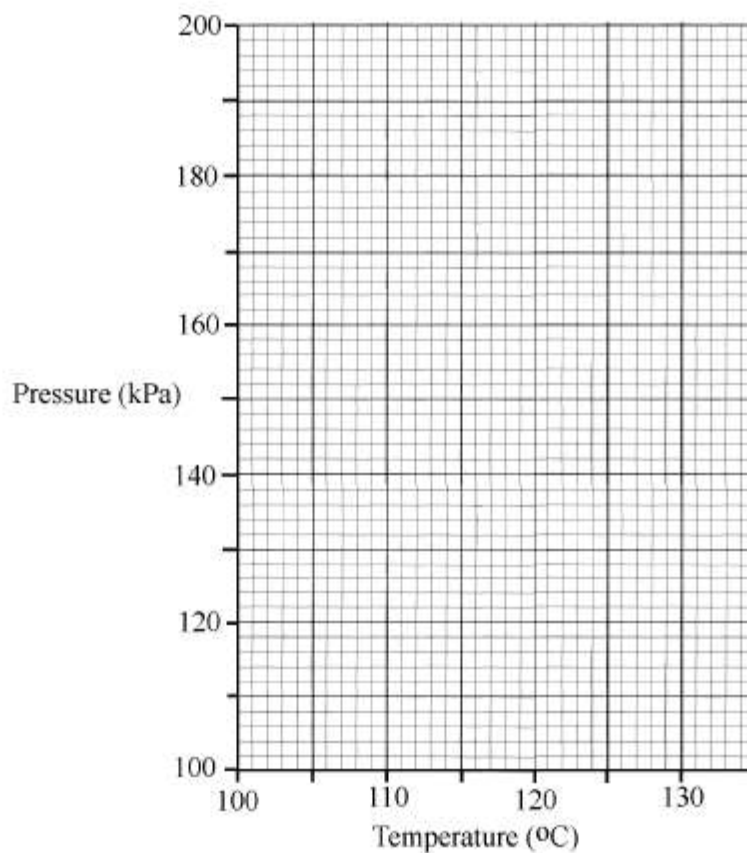
Q8 Part (a) 2012

(a) Define pressure. _____ (3)

An experiment was performed to investigate the effect of pressure on the boiling point of water. The data from the experiment is given in the table below.

Pressure (kPa)	100	120	140	160	180	200
Temperature (°C)	100	105	109	114	119	124

(i) Draw a graph of pressure against temperature using the grid below. (9)



(ii) What two pieces of information can be drawn from the graph about the relationship between the boiling point of water and pressure. (6)

1 _____

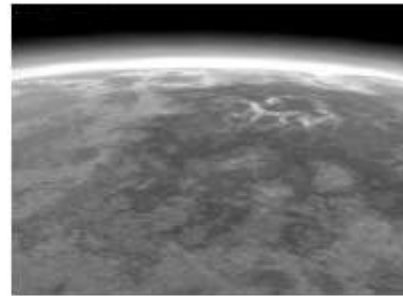
2 _____

(iii) What effect would reducing the pressure on water below normal atmospheric pressure, about 100 kPa, have on its boiling point? (3)

What?

Q7 Part (h) 2011

(h) The Earth's atmosphere seen from space is the thin curve at the top of the photo.



(i) Name the force that holds the atmosphere to the Earth.

Name _____

This force gives the atmosphere weight and causes atmospheric pressure.

(ii) Define pressure and give the unit for pressure.

Define _____ Unit _____

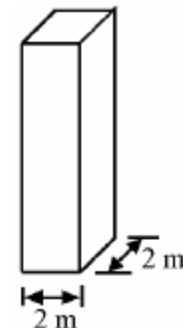
(iii) Why does atmospheric pressure decrease with height?

Why? _____

Q7 Part (e) 2010

(e) The diagram shows a tank full of water. The mass of the water in the tank is 48 000 kg. Calculate the *approximate pressure* that it exerts on the base of the tank. Give the *units* of pressure with your answer.

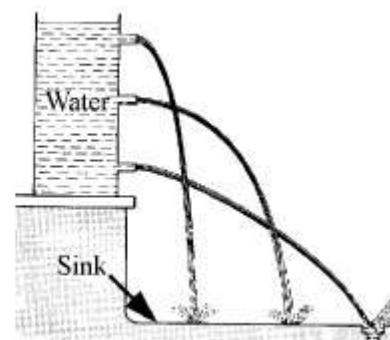
Calculate _____



Q7 Part (c) 2009

(c) The diagram shows a container with three spouts. The container is filled with water. Jets of water pour out of the spouts. Why does the *jet of water from the bottom spout travel the furthest out from the container?*

Why? _____



Q9 Part (a) 2009

(a) The *boiling point of water* can be determined using the apparatus shown in the diagram.

(i) Why are *boiling (anti-bumping) chips* added to the water? (3)

Why? _____

(ii) At what *temperature* does *water boil*, at *standard (normal) atmospheric pressure*? (3)

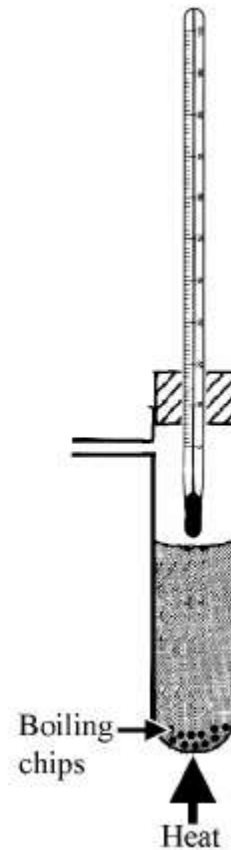
What? _____

(iii) What *effect* does the *raising of pressure* have on the *boiling point* of water? (3)

Effect of raising pressure _____

(iv) What *effect* does the *lowering of pressure* have on the *boiling point* of water? (3)

Effect of lowering pressure _____



Q7 Part (h) 2007

(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 _____
