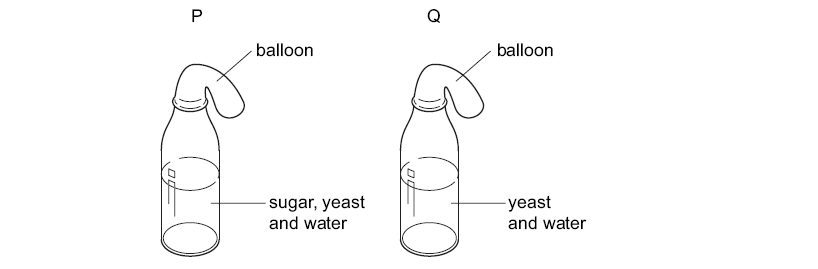
**Name ……………………………………………… Class ……………………………**

**Biology**

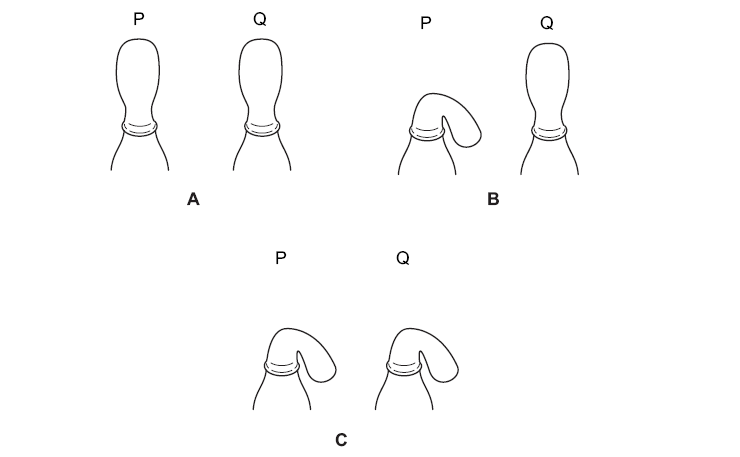
**Q.1** In an experiment to investigate anaerobic respiration, two bottles are set up in a warm room, as shown in the diagram.

**a-** What would happen to each balloon after one day?

P……………………………………………………………………………………………..

Q …………………………………………………………………………………………… [2]

**b-** The diagrams below show some results from the students’ experiments.



**i-** According to your answers in part **(a)** which diagram, if any, would support your answer?

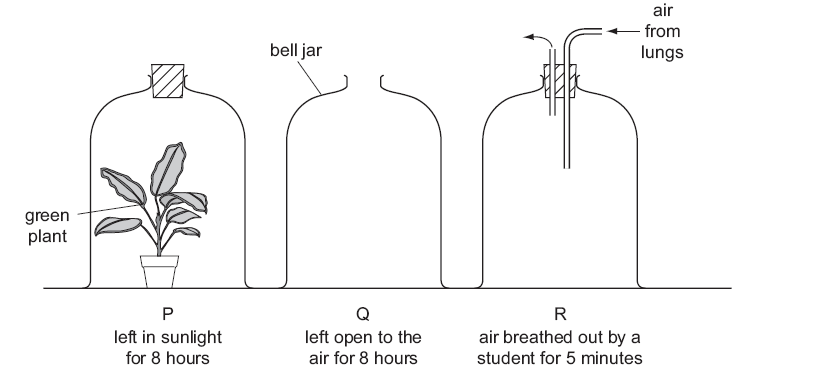
…………………………………………………………………………………………………. [1]

**ii-** Explain your answer.

………………………………………………………………………………………………………

………………………………………………………………………………………………… [2]

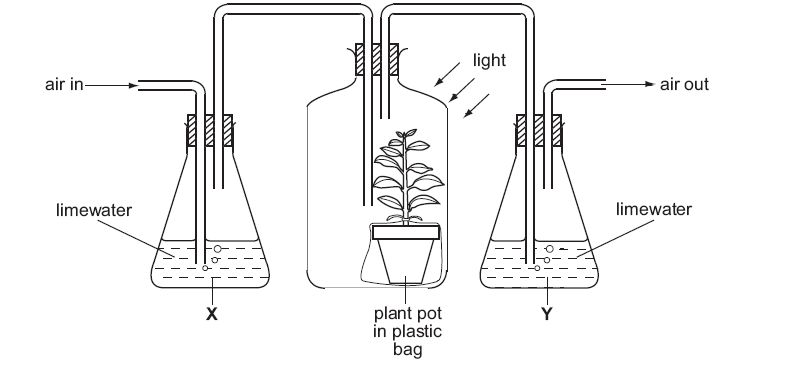
**2. .** In an experiment, three glass bell jars were set up as shown in the diagram.

****

At the end of the experiment, which bell jar has the most oxygen and which has the least?

Most oxygen ……………………………………………………………………………..

Least oxygen……………………………………………………………………………… [2]

**3.** The apparatus shown in the diagram is used to investigate the effect of a green plant on carbon dioxide in the air.

Limewater goes cloudy if carbon dioxide is bubbled through it.

What happens to the limewater in **X** and in **Y**?

**(a) X**:………………………………………………………………………………………………

**Y**:………………………………………………………………………………………… [2]

**(b)** Explain your answer fully.

………………………………………………………………………………………………………

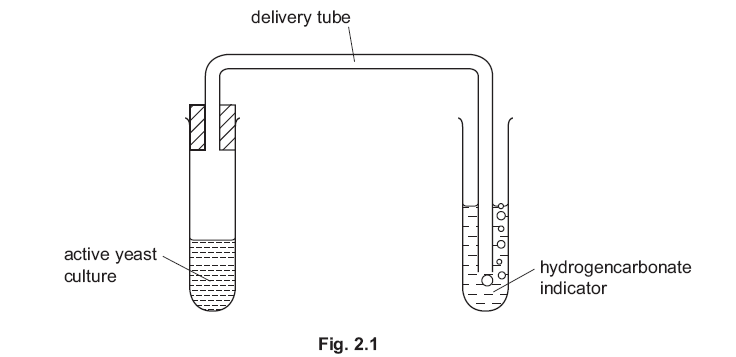
………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………….. [3]

**4.** An active yeast culture is placed in a test-tube. This test-tube is connected by a delivery tube to a second test-tube containing hydrogencarbonate indicator shown in Fig. 2.1.

Hydrogencarbonate indicator changes colour according to pH. In alkaline solutions the indicator becomes purple and in acidic solutions the indicator becomes yellow.

****At the start of the experiment the indicator is red in colour. After 15 minutes the indicator becomes yellow.

**(a)** Explain the reason for this colour change.

………………………………………………………………………………………………………

………………………………………………………………………………………………………

………………………………………………………………………………………………… [3]

**(b)** Describe how you would collect and measure the volume of gas given off per minute by20 cm3 of the active yeast culture.

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………………………………………………………………………………………………… [6]