B9 Respiration

Name…………………………………………….

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| Question No | Mark |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| Total |  |

Class …………………………………………….

Teacher ………………………………………..

%....................... Grade ……………….

* 1. Complete the word equation for aerobic respiration.

Glucose + ………………………….. 🡪 carbon dioxide + …………………………….

[ 1 mark ]

* 1. What type of reaction is aerobic respiration ?

**A** endothermic

**B**  exothermic

**C** fermentation

**D** reversible [ 1 mark ]

* 1. In which part of a cell does aerobic respiration take place ?

**A** chloroplast

**B** nucleus

**C**  mitochondrion

**D** ribosome [ 1 mark ]

1. Glycogen is stored in the liver.

Describe how stored glycogen can provide glucose to respiring cells in a different part of the body.

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1. Muscle cells can respire aerobically and anaerobically.

Compare these two types of respiration in human muscle cells.

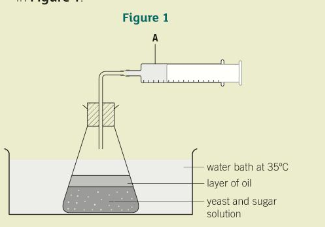
You should include both similarities and differences.

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1. Yeast cells can respire anaerobically.
   1. What is anaerobic respiration in yeast cells called ?

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

* 1. A student measured the rate of anaerobic respiration in yeast using the apparatus shown in **Figure 1**



The Student’s method was as follows.

* Mix yeast and sugar solution together in a flask.
* Cover the surface of the liquid with oil.
* Put the flask into the water bath and leave it for 15 minutes.
* After the 15 minutes, connect the apparatus labelled **A** to the flask.
* Measure the volume of gas collected in **A** every two minutes for 20 minutes.

Suggest why a layer of oil was put on top of the yeast and sugar solution.

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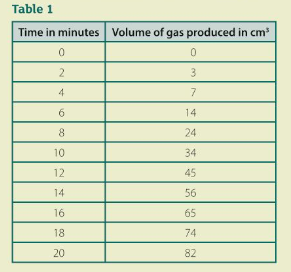
* 1. What is the piece of apparatus labelled **A** called ?

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* 1. Give one reason why the flask was left in the water bath for 15 minutes before apparatus **A** was connected.

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

The student’s results are shown in **Table 1.**

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* 1. Plot the results on graph paper.

Choose suitable scales, label both axes , and draw a line of best fit.

[ 4 marks ]

* 1. Calculate the rate of anaerobic respiration over the 20 minutes in cm3 / min. ………………………………………………………………………………………………………

……………………………………………………………………………………………… [ 1 mark ]

04.7 Predict how the results would be different if the investigation was done at 65 °C. Explain your prediction.

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* 1. Give two ways anaerobic respiration in yeast is of economic importance to humans.

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