

A Level Biology A
H420/01 Biological Processes

Question Set 8

- 8 (a) (i) Gestational diabetes is a medical condition that affects pregnant women. It results in high levels of glucose in the blood, even though the woman produces normal levels of insulin.

Gestational diabetes is most similar to which **other** type of diabetes? Explain your answer.

[2]

- 8 (a) (ii) Gestational diabetes is a medical condition that affects pregnant women. It results in high levels of glucose in the blood, even though the woman produces normal levels of insulin.

Suggest **two** ways a woman with gestational diabetes can manage her condition.

[2]

- 8 (b) (i) Skeletal muscle is one of the main tissues where glucose is removed from the blood in response to insulin.

Name the other tissue.

[1]

- 8 (b) (ii) Explain why glucose is required for the contraction of skeletal muscle.

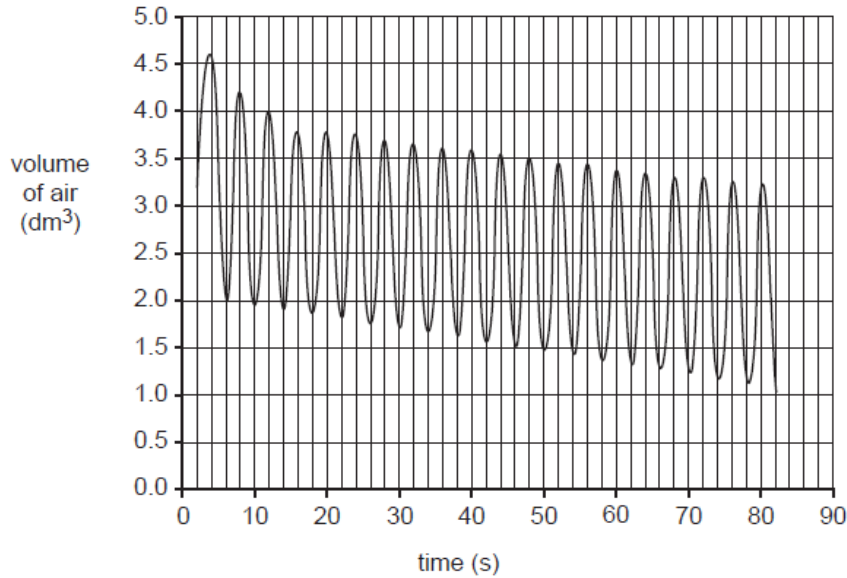
[3]

8 (c)

During late pregnancy, women find ventilation more difficult, as the developing foetus reduces the volume of the thorax. This can lead to tiredness and difficulty breathing.

A student used a spirometer to measure ventilation in a woman who was 36 weeks pregnant.

The figure shows the trace produced.



Mean oxygen uptake rate at rest in women is around $0.020 \text{ dm}^3 \text{ s}^{-1}$.

Using these data, the student made the following conclusion:

My data show that being pregnant reduces rate of oxygen uptake by up to 20%.

Use the data to evaluate this claim.

[3]

Total Marks for Question Set 8: 11

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