

4.2.3 Metabolism

AQA GCSE Biology (Higher) Question and answer notes

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How to use these notes

These notes cover everything you need to know for this part of the specification. They have been written in question-answer format to make them easier for you to study from.

In order to study successfully, I recommend you do the following for each question and answer:

- Read it carefully and make sure you **understand** it.
- **Memorise** the answer.
- **Practice** applying your understanding to past exam questions.

A good way to memorise information is to use **retrieval practice**. This is when you practise retrieving information from your memory. You could do this by making a flashcard for each question with the question on one side and the answer on the other. Or you could use a flashcard app. Alternatively, use a sheet of paper to cover up the answer so you can only see the question. Try to answer the question and then check how you did.

You should practise retrieving each answer from your memory until you can do it perfectly. Even once you can retrieve the answer perfectly, your ability to retrieve it will probably fade as time passes without practising. Therefore you will need to keep going back to the questions that you have previously mastered and practising them again. However, each time you re-learn the answer, the memory will be stronger and will last longer than the time before.

What is metabolism?

Metabolism is the set of chemical reactions that take place within a particular cell or organism.

How are enzymes involved in metabolism?

All chemical reactions within living things are controlled by enzymes.

Which other biological molecules do living organisms make out of glucose?

Some living organisms combine multiple glucose molecules to make starch, glycogen or cellulose. Living organisms also combine glucose with nitrate ions to make amino acids.

What are amino acids used to make?

Amino acids are used to make proteins.

What happens to excess proteins within living organisms?

Within living organisms, excess proteins are broken down. This produces a waste product called urea that needs to be excreted.

How are lipid molecules formed?

Lipid molecules are formed by joining three fatty acid molecules onto one molecule of glycerol.

Which chemical reaction is used to release energy from food molecules?

Respiration is used to release energy from food molecules.