Answering biology questions

This document provides suggestions to students about ways to approach biology exam questions. It is intended to be used alongside information provided by the students' school.

## For each question

* Read and interpret the stimulus material. This may include:
  + text extracts from scientific journals, newspapers, advertisements
  + graphs – bar, column, line, scatter, pie, box and whisker
  + tables of numbers or text
  + maps
  + flow charts
  + diagrams (which may or may not have labels)
  + pictures
* Read the question
* Identify what you need to do in the question. What is the verb?
  + discuss, explain, describe, identify, account for, calculate. Your teacher will have supplied you with definitions of these.
  + draw - a model, a graph, a flow chart, a diagram. If the question asks for a flow chart, then make sure you draw one. Do not just write a paragraph of information instead. This will usually mean that you have access to about half the available marks. For graphs, ensure you label and scale axes correctly. While there are no marks allocated for drawing in pencil, it is recommended. This will allow you to make any adjustments clearly. Also use a soft pencil (B). Because HSC Biology papers are scanned and marked online, faint, hard pencil is harder to read.
* Highlight the key words
* Look at the number of marks allocated to the question to give you an indication of how much information is required in your answer.
  + A one-mark answer will usually only require one or two lines of answer. Writing a page will not earn you more marks.
  + A question allocated 5 or more marks may need you to write a page or more. That said, quality answers for the largest mark questions in Biology rarely exceed 2 to 3 pages.

## For longer response questions

* Jot down an outline of your answer. The plan will give structure to your answer ensuring that you answer the question and not wander off on a tangent.
* If you are asked to draw/describe/explain the steps in a process, then include **all** the steps. List and number them in your outline.
  + Processes such as mitosis, meiosis, protein synthesis, recombinant DNA production, Koch’s postulates and the specific immune response have set steps. If you are asked to draw flow chart or describe the steps, then include them **all**.
  + Under examination conditions tick off each point on your outline as you cover it. That way you are less likely to forget to include information you intended to include.
* If the question specifies a number of examples/reasons/factors, then list and number them in your outline.
  + If the question asks for 2 then give 2. You won’t get extra marks for giving 4!
  + On the other hand, if you can only remember one, then do one well. You should be able to access at least half the marks for the question.
* If no number of examples/reasons/factors is specified but a plural is indicated in the question, then you need to include at least 2.

## Write your answer

* Use your outline**.** This will keep you on track. Of course, if you remember something else that needs to be included, then add it in the appropriate place
* Do not restate the question. If the question asks you to refer to the stimulus material this does not mean simply restate what is in there. You need to connect that information to the point you are making.
* Remember to use the appropriate science vocabulary – avoid ‘stuff’ and ‘things’
* Use paragraphs. While there are no marks for the use of paragraphs in the examination, using them will help give your answer structure and make it much easier to mark. Markers do try to find as many marks as possible for you but if you make it easy for them to find these marks it will ultimately benefit you.

## For the questions attached

* Use the marking criteria to assign a mark to your answer. When using the marking criteria, markers always start at the maximum number of marks to determine if the student’s answer meets those criteria. If it does not, they move down to the next mark down, and so on, until they reach the level the answer is at.
* Look at the sample answers provided. They cover a range of marks. Comments are included to explain the marking.
* Reassess your answer, identifying how you need to improve your answer. If your answer did not make maximum marks was it because:
  + You did not know your content. Solution - more revision!
  + You did not understand, or misunderstood, what you were expected to do in the answer. Solution - revise those verbs and do more practice questions.
  + You did not understand the stimulus material, for example a map, journal article, graph. Solution - seek out more questions that include this material and ask your teacher for guidance.