

## Tips for Writing AP Biology Exam Essays

Compiled from various teachers, including Lois Peterson, Louise Huey, Richard Patterson, and Franklin Bell

### DO:

1. The first thing you should do is carefully read the question. The second thing you should do is read the question, and the third thing you should do is read the question. Be sure that you answer the question that is asked and only that question, and that you answer all parts of it. If you are given a choice of parts to answer, choose carefully. Don't answer all parts in that case. As you read the question, pay particular attention to bold and underlined words, they are important.
2. Briefly outline the answer on scratch paper to avoid confusion and disorganization. Pay close attention to the verbs used in the directions (such as 'describe', 'explain', 'compare', 'give evidence for', 'graph', 'calculate', etc.) and be sure to follow these directions. Thinking ahead helps to avoid scratch outs, skipping around, and rambling. Practices outlining your essay answers on scratch paper as you take your tests throughout the year.
3. Write an essay. Outlines and diagrams, no matter how elaborate and accurate, are not essays and will not get you much, if any, credit by themselves. Exceptions: If you are asked as a part of an essay on a lab to calculate a number, this does not require that you write an essay, but be sure to show how you got your answer (show the formulas you are using and the values you have inserted into those formulas); or, if you are asked to draw a diagram in the question, do so, but be sure to annotate it carefully.
4. Define the terms you use. Say something about each of the important terms that you use. I cannot stress this point enough. Define the simple terms and the complex terms. Often it is the easy definitions that are left out. If you do not write it, you cannot get points for it!
5. Answer the question parts in the order called for. It is best not to skip around within the question. The four essay questions do not have to be answered in any particular order. Clearly label each essay and each part of the essay. If the essay is set up with internal parts A, B, C; then answer them that way, and clearly label each part.
6. Write clearly and neatly. It is foolhardy to antagonize or confuse the reader with lousy penmanship.
7. Go into detail that is on the subject and to the point. Be sure to include the obvious (for example, "light is necessary for photosynthesis"). Answer the question thoroughly.
8. If you cannot remember a word exactly, take a shot at it--get as close as you can. If you don't have a name for a concept, describe the concept. Remember, the test is often graded conceptually, so you may well get the point for the idea you have described.
9. Use a ball point pen with dark black ink.
10. Remember that no detail is too small to be included as long as it is to the point. You want to write down everything you know about a topic, but stay on the topic. For instance, if a question asks about the structure of DNA, talk about the helix, the bases, the hydrogen bonds, introns, exons, etc. Do not waste time on RNA, expression, Mendelian genetics, etc.
11. Carefully label your diagrams (they get no points otherwise) and place them in the text at the appropriate place, not detached at the end. Be sure to refer to the diagram in your essay.
12. Widen your margins a little. This will make the essay easier for most folks to read.
13. Bring a watch to the exam so that you can pace yourself. You have four essays with about 22 minutes for each answer.
14. Understand that the exam is written to be difficult. The national average for the essay section will be about 50% correct, that is 5 points out of a possible 10 on each essay. It is very likely that you will not know everything. This is expected, but it is very likely that you do know something about each essay, so relax and do the best you can. Write thorough answers.

In recent years the AP Exam has included what are called synthesis and conceptual questions.

**Do** include these things if you are asked to design or describe an experiment:

Hypothesis and/or predictions

Identify independent variable(s)--which treatments will you apply

Identify dependent variable(s)--what will you measure

Identify several variables to be controlled (VERY IMPORTANT) State, "Controls are....."

Describe the organisms/materials/apparatus to be used

Describe what you will actually do (how will you apply the treatment)

Describe how you will actually take and record data

Describe how the data will be graphed and analyzed

State how you will draw a conclusion (compare results to hypotheses and predictions)

Your experimental design needs to be at least theoretically possible and it is very important that your conclusions/predictions be consistent with the principles involved and with the way you set up the experiment

**Do** include these things in a graph:

Set up the graph with the independent variable along the y-axis and the dependent variable along the x-axis

Mark off axes in equal (proportional) increments and label with proper units

Plot points and attempt to sketch in the curve (line)

If more than one curve is plotted, write a label on each curve (this is better than a legend)

Label each axis

Give your graph an appropriate title (what is it showing?)

### **DON'T**

Don't waste time on background information or a long introduction unless the question calls for historical significance. Answer the question.

Don't ramble--get to the point!

Don't make stuff up--say what you know and go on to the next question. You can always come back if you remember something.

Don't use a pencil, and don't use a pen with an ink color other than black. Don't use a felt-tip pen because the ink seeps through the page and makes both sides of paper hard to read.

Don't panic or get angry because you are unfamiliar with the question. You probably have read or heard something about the subject--be calm and think.

Don't scratch out excessively. One or two lines through the unwanted word(s) should be sufficient.

Don't write more than a very few words in the margin.

Don't worry about every word perfectly or using exact grammar. These are not a part of the standards the graders use. It is important for you to know, however, that very poor spelling and poor grammar may create an impression in the subconscious of the grader.

Don't write sloppily. It is easy for a grader to miss an important word when he/she cannot read your handwriting. If a word cannot be read, it cannot earn a point.

Avoid writing with large loops, which extend above and below the lines. This makes it very hard to decipher your writing.

Don't leave questions blank. Remember that each point you earn on an essay question is the equivalent of two correct multiple choice questions, and there is no penalty for a wrong guess (on the multiple choice portion only!); make an effort on every question! Don't quit! Start writing about something related to the question, oftentimes as you start writing, you will find yourself recalling more than you think you know.

### Strategies for Answering Free Response

Use your time effectively. You have 90 minutes to complete Section 2, which contains four free response essay questions. In precise terms this means that you are to read and interpret, organize data and the supporting information, write an answer in essay format, and proofread an essay (on the average of) every 22.5 minutes. Although you will be given a 10 minute reading period before the

90 minute time period begins, this may still seem impossible. There are several things that you can do to better your chances of using your time effectively.

**1. Respond to the Question. Key words in the question should guide your responses.**

<b>If you are asked to:</b>	<b>Your essay should:</b>
<b>Compare</b>	Show similarities between objects, ideas, phenomena, etc.
<b>Contrast</b>	Show dissimilarities between two objects, ideas, phenomena, etc.
<b>Define</b>	Provide the accepted definition for a word. The response should be given as a complete sentence.
<b>Describe</b>	Provide a list of features that characterize objects, ideas, phenomena, etc.
<b>Discuss</b>	Select a particular viewpoint and support your position with facts, examples, observations, reasoning, and descriptions.
<b>Explain</b>	Provide a series of well-developed and logical statements which give the reason for or cause of an event or events.
<b>List</b>	Provide a simple series of words, sentences, or phrases as requested. Enhance clarity by labeling each word, sentence, or phrase with sequential numbers or letters.
<b>State</b>	In a logical progression, record the facts related to the question. You are not required to provide proof or illustrations.
<b>Trace</b>	Describe the sequence of the process or the evolutionary development of the concept.

**2. Multiple Sub questions:** When you are asked to include several responses in your essay, such as "list, compare, and contrast," respond to each request individually. If you are not asked to integrate your answer, do not do so. Use your time to provide only the information that is requested.

**3. Practice:** In addition to increasing your information base, responding to practice questions can save you time when you need it most. By using the examples given out in class, class exams, textbook review questions, or questions from an obsolete exam available from AP Central, you can become familiar with the format and wording of essay questions similar to those used in the AP exam. In each practice experience, look for and respond to the key words listed above.

**Five Steps to Follow: Read, Quick Response, Reread, Detailed Response, Reread**

One of the most helpful strategies for handling essay questions is a five-step process which involves: reading, a quick response, rereading, a detailed response, and rereading. aspects (e.g., key words) of an essay question. In order to minimize that possibility, the following five-step process is recommended.

During the first 3 to 5 minutes:

**1. Read the question quickly but do not skim.** It may even pay to quickly read every word. Slow down at key words or other directional aspects of the question. You may want to underline or circle important terms.

**2. Quick Response:** On scrap paper during reading time, quickly respond to your first reading of the question in simple terms or short phrases. You may even diagram relationships as they come to you. As you are writing, additional ideas may come to you. Jot those down also. Start to formulate an approach and organization, a logical introduction, body, and closing to the essay.

During the next 15 minutes:

3. Reread the question. Make sure that you are responding to what is requested. If you have underlined or circled terms, do not disregard the unmarked terms.

4. Detailed Response: Using the question as your guide, incorporate your quick responses (from your scrap paper) into logical and coherent responses. As you write your detailed response, new ideas may come to you. Interrupt your writing for a moment in order to jot these ideas down. Then return to your detailed response. Write in short, declarative sentences. Do not become flowery. If there are multiple sub questions, gauge your time appropriately. Do not spend too much time on one aspect of the response. There are limits to the number of points awarded to any one subresponse. When you are finished with that response, go back to the ideas you jotted down and shape them into responses.

During the last 5 minutes:

5. Reread. Take time to quickly reread the question one more time. You may find that you have left out one or more important sub questions. Quickly proofread your response.

Note: When the time allotted for that essay is over, move on to the next essay no matter how much you feel that a few more minutes would improve the essay that you have just completed. If you have time after completing the other essays, go back to those which you feel you could improve.

**MULTIPLE-CHOICE QUESTIONS** Three Steps to Follow: Read, Eliminate, Reread

One of the most helpful strategies for multiple-choice questions is a three-step process: reading, elimination, and rereading. Most people tend to see what they expect to see. In test taking this can be a counterproductive tendency.

1. Read the question quickly but do not skim. It may even pay to quickly read every word. Slow down at words which link by causation such as "due to" and "because" or "as a result of" and at words of totality such as "never" or "always."

2. Eliminate wrong answers one by one. Do not jump to the answer that you think is correct. While elimination may appear to take more time, it is more likely to provide correct answers. In the rush of the test it is easy to select an answer that looks right at first, but on more careful reading does not answer the question. In addition, answer elimination may provide a clue to a misread answer you would have overlooked.

3. Reread the question, as if you were reading it for the first time. Now choose your answer from your remaining answers based on this rereading.