Tips For Writing AP Biology Exam Essays (Free Response Questions)

DO's

1. The first thing that you should do is to carefully ***read the question***. Before writing an answer, the second thing you should do is ***read the question***, and the third thing you should do is ***read the question***. **This will be a lot easier this year (2006) because there has been a 10 minute reading period included during which you can read the questions and start to plan your answers before you will be allowed to write in the essay booklet.** 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.

2. Briefly outline the answer 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 those directions. Thinking ahead helps to avoid scratch outs, astrices, skipping around, and rambling.

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 part does not require an essay, but be sure to show how you got your answer by showing the formulas you are using, the values you have inserted into those formulas and display the proper units on the answer; or, if you are asked to draw a diagram in the answer, do so, but be sure to annotate it carefully and thoroughly.

4. **Define and/or explain the terms you use. Say something about each of the important terms you use. The AP Exam will not ask for a list of buzzwords. Use high-level vocabulary but use it in context.**

5. Answer the question parts in **the order called for,** and use the question's labels ("a", "b", etc.) to identify the different parts of your answer just like they are labeled in the question. **It is best not to skip around within the question**. The essays appear on separate green paper and will be reprinted in the essay book for you. **Answer the questions right below where they are reprinted in the booklet.** There will be several pages of lined paper allotted for each question, so when you finish writing an answer, keep turning pages until you find the next question printed in the pink booklet.

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. Most points are given for the basics anyway (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. Even if you don't remember the name for a concept, **describe** the concept.

9. Use a ball point pen with dark black ink. If your ink "bleeds" through to the other side of the paper, don't write on the back of that page--go to the next page. That will make it make it easier for the reader.

10. If you use a diagram, **carefully label it (it will get no points otherwise)** and place it in the text at the appropriate place--not detached at the end. Be sure to refer to the diagram in your essay. Also, it is ok to widen your margins a little. This will make the essay easier for most folks to read.

11. **Bring a watch** to the exam so that you can pace yourself. You have four essays with about **22** minutes for each answer. The proctor will not give you time cues. You should have enough time, but keep an eye on the clock just in case.

12. Understand that this exam is written to be hard. Over the last five years, the national average for the essay section will be less than 15 points out of a possible 40. That is an average of less than 4 points out of a possible 10 on each essay. It is very likely that you will not know everything. This is expected, but you will know **something** about each essay. So relax and do the best

you can. Write thorough answers.

13. If you are asked to design or describe an experiment, you should consider including these things:
    - hypothesis and/or predictions--call attention to it by calling it by name ("my hypothesis is…) or using an "if .....then" structure.
    - identify the independent variable(s)--what treatments will you apply?
    - identify dependent variable(s)--what will you measure to see if the independent variable had an effect?
    - describe **how** you will measure the dependent variable, AND why it will work in this case
    - identify several experimental variables to be held constant, and **how** you will keep them constant.
    - describe the organism/materials/apparatus to be used--why are each of the parts important?
    - describe what you will actually do (how will you apply the treatment)
    - describe how the data will be graphed and analyzed--how will a rate be determined, how will you compare the experimental and control groups—compare the means, chi square, etc.. Expect to have to make a prediction of results based on your experimental design.
    - Your experimental design needs to be at least theoretically possible and scientifically plausible and it is very important that your conclusions/predictions be consistent with (1) the principles involved in the question, and (2) with the way you set up your experiment. Make sure the experiment is internally consistent.
    - **Do not hesitate** to use the experimental designs that we used in our AP labs this year.

14. If you are asked to draw a graph, include these things:
    - set up the graph with the independent variable (manipulated variable) along the x-axis and dependent variable (responding variable) along the y-axis.
    - mark off axes in equal (proportional) increments and label with proper units
    - label each axis with the variable name and include the units in which it is measured (C^o, min)
    - plot points and attempt to sketch in the curve (line). **Any curve line that extends beyond the given data points (extrapolation) must be a dashed line.** Remember that a data point of 0,0 may be implied by the given experimental design—but consider carefully before plotting this point.
    - if more than one curve is plotted, write a label on each curve (preferred) or make a legend.
    - give your graph an appropriate title. Tell what the graph is showing? You might try wording it in the form of, "Y" as a function of "X." Include a title somewhere even it there is no room for one on the given graph paper.

DON'Ts

1. Don't waste time on background information or a long introduction unless the question calls for historical development or historical significance. **Answer the question.--don't rewrite it!!**

2. Don't ramble--get to the point, and don't shoot the bull--say what you know and go on to the next question. You can always come back if you remember something.

3. 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 the paper hard to read. Don't scratch out excessively. One or two lines through the unwanted word(s) should be sufficient, and don't write more than a very few words in the margin.

4. 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. Write on other questions and come back. If a question has several parts and you have no clue about one or two parts, don't quit!! Write whatever you know about the other parts of the question. Every single essay point helps your grade.

5. Don't worry about spelling 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, very poor spelling, lousy grammar, and unreadable handwriting can hurt your chances.

6. If you are given a choice of several topics to write about ("describe 3 of the following 5 topics"), understand that **only the first ones you mention will count**. You must make choices and stick with them. If you decide that one of your first choices was a bad, then cross out that part of the answer so the reader can easily tell which part(s) you wish for him/her to read for points.

7. Don't leave questions blank. The mean for the Free Response questions last year (2003) was only about 11.4 points out of 40 points possible . You can do better than that!!! Remember that each point you earn on an essay question is the equivalent of about 1.6 correct multiple choice questions, and there is no penalty for a wrong guess, baad spelig; or bad grammar. **Make an effort on <u>every</u> question**!

Don't Quit!