

APES in a BOX: The Review Sessions

The Exam

Before you begin to cram for the exam, let's look the beast in the eye to see what you're really up against. Here we'll break down the multiple choice and free response portions of the exam, and begin to develop some test day strategies to help take your score to the next level. First let's deal with the evil badness. Oops, I mean the multiple choice.

Multiple Choice

When properly prepared for the exam, students often tell us that the most difficult portion of the test is the multiple choice (MC). This portion of the exam requires that the student be able to recall and apply very specific information. Knowing what to expect will go a long way toward alleviating test anxiety and preparing you to make the most of the multiple choice. This portion of the exam consists of 100 multiple choice questions that you will have 90 minutes to answer. There are several types of mc questions which we have included.

On the multiple choice portion of the exam time is your enemy! It will be very difficult to answer every question with less than a minute given per question. We recommend going through the exam twice. The first time, skip questions that you cannot answer quickly. Once you have gone through the exam and have answered all of the "easy ones", use the remaining time to go back and answer the remaining questions. If the clock is ticking down and all else fails, make sure that you bubble in answers to all questions. DO NOT LEAVE ANY QUESTIONS BLANK.

Sample Multiple Choice Questions

The Question Set: There will be question sets that use the same five answer choices to answer multiple questions. Here is an example:



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Use the following answer choices to answer questions 1-3 .

- a. Hydrothermal energy
 - b. Wind generated electricity
 - c. Photovoltaic cells
 - d. Passive solar energy
 - e. Biomass energy production
1. Refers to the use of organic matter to produce energy or electricity.
 2. Collects energy from the sun, and converts it into electricity.
 3. Directly uses the sun's energy to heat water or air.

The Multiple-Multiple Choice: A lot of time can be wasted on the multiple-multiple choice by going back and forth between the roman numerals and the answer choices. The best way to tackle this question is to mark each Roman numeral as being true or false. When you get to the end, find the answer choice that corresponds with your true or false analysis. In the problem below I-III are true, and IV is false, therefore the correct answer choice is C. I, II, and III only.

4. Which of the following are problems associated with the use of monoculture crops in agriculture?
 - I. Increased use of pesticides
 - II. Increased use of fertilizers
 - III. Increased use of irrigation
 - IV. Decreased food production
- A) I only
 - B) I and II only
 - C) I, II, and III only
 - D) I, II, and IV only
 - E) I, II, III, and IV



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The Traditional Multiple Choice With Five Answer Choices

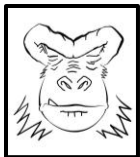
5. All of the following are problems associated with construction of dams **except**:
- A) Regular downstream flooding.
 - B) Trapping of sediment behind the dam.
 - C) loss of habitat from the formation of a reservoir.
 - D) The high initial cost of building a dam.
 - E) The disruption of migratory routes for certain species of fish.

The Free Response

The free response questions are graded with a rubric which means that you will be awarded points based on your correct answers. Points are not deducted for incorrect answers. Because of this, you should attempt to answer every portion of the free response. Let's break down the free response.

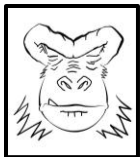
You will have 90 minutes to answer the four free response questions, and you will not be allowed to use a calculator. Later, we will look at each type of question that is likely to show up on the free response portion. First, here are our top ten keys for success on the free response:

1. When you begin the test, quickly read all of the questions, and rank them in order of difficulty. Begin working on the "easiest" question, and work your way toward the more difficult ones. Since this is a timed test, you would rather spend your time working on the questions that you will most likely be able to complete successfully. If you do run out of time, you would rather run out of time on the most difficult question.
2. Answer the question in the order that it is given to you. If the question has parts A, B, C, D, and E, then your answer should also have parts A, B, C, D, and E. Go ahead and label each part of your answer and leave a space in between each one. This will make it easier for the grader to read your paper and award you with the points that you have earned. If your answer is written in one giant paragraph, it makes it much more difficult to grade.



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3. Stay on task! While you are writing, ask yourself whether or not what you are writing is directly answering the question. If the answer is no, then you shouldn't be writing it. Stay away from flowery introductions, and don't restate the question. **ONLY ANSWER THE QUESTION.** Points are awarded for the correct answers that are found on the grading rubric. It only wastes time to write extra stuff.
4. Pay very close attention. This one is important. You need to be specific in your answers. For example, if a question asked you to "describe an environmental impact of using fossil fuels for transportation" you might answer that using fossil fuels generates air pollution. This would be a true statement, but it would not earn any points. You need to be more specific. You should explain that burning fossil fuels generates CO₂ emissions, increasing greenhouse gases, or that burning fossil fuels generates SO₂, which can contribute to acid rain. Specific answer = points.
5. From time to time you will be asked to draw a graph. Make sure that you give your graph a descriptive title. Your title should explain what is happening in the experiment. Make sure to label your axes appropriately. Your label should include what is being measured and the units of measurement. For example, Time (seconds).
6. Write your answers in complete sentences. The grader cannot assume anything, and can only give you credit for what you write. The more descriptive you are, the more likely you are to earn points.
7. Show all work on calculations. If a free response asks you to calculate something, there is probably a point given for the correct answer and a point given for showing all of your work.
8. Remember that the free response is graded with a rubric, and you will be awarded points for the things that you write correctly. You will not be penalized for incorrect answers. With that in mind, you should attempt every portion of each of the free response questions.
9. Lately there have been some pretty complicated schematic diagrams on the free response portion of the test. There are boxes with arrows pointing every which way, and they often confuse students to the point that they don't really attempt the question. If you see a complicated schematic diagram, try to analyze it as a generic system. Follow the arrows and ask yourself what is going into the system, what is happening in the system, and what is coming out of the system. This will usually help you identify the important parts of the diagram, and help you formulate your answer.



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10. Make your grader happy! Imagine that your paper is going to be graded by a very tired grader with eye fatigue. Write your answer concisely and neatly. Make it as easy as possible for your grader to read your answers.

The Free Response Types: There are four questions on the free response portion of the exam, and they usually follow these three question formats.

1. The document based question (DBQ): The DBQ begins with an article to read. The article is usually a fictitious article from a newspaper, and is usually about half a page long. The article will outline a particular environmental problem. You will then be asked to answer a set of questions that are related to the article. The article is there to set up the problem. We would not recommend quoting the article in your answer. You are expected to come up with your own answers, and will not usually get points for answers that are taken directly from the reading.

2. The calculation question: There will most likely be one question that requires a great deal of calculation. Most of the points in this question will be awarded for correctly setting up the problems, and correctly answering them. If you are a math whiz, then this is your time to shine. If math freaks you out, do not skip this question. Check all of the parts of the question. Some of the parts may not be calculation based at all, and you may still be able to earn some points on the question. Sometimes you will be asked to draw a graph. If this is the case, then be sure to appropriately title the graph and label the axes.

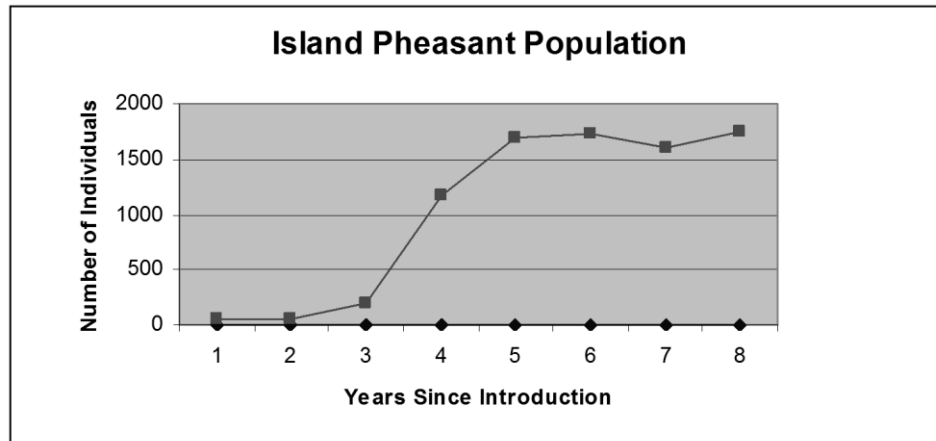
3. The content questions: Two of the four questions generally require you to have some specific content knowledge. For example, you may be asked to describe a process such as wastewater treatment. Further in the question you may also have to know some advantages and disadvantages of the wastewater treatment process, some alternatives to traditional wastewater treatment, and maybe even describe a law that relates to wastewater treatment.



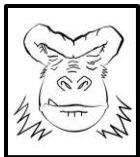
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Sample Free Response

During the 1930s, biologists introduced pheasants onto an island in Washington State. Using the following data, on the island's pheasant population, answer the questions below.



- What is the approximate carrying capacity for the pheasant population?
- Population density refers to the number of individuals living in a particular area. If the size of the island is 25 km^2 , then what is the population density (per km^2) during year seven? Please show all work.
- Describe what the birth and death rates of the pheasant population must have been like during years 3-5. What other factors may have contributed to the rapid population growth seen during this period?



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When preparing for the AP exam, you should be comfortable with the following information about the topics in this book, in your textbook, or in your APES class. For each topic you should know at least one or two examples of these types of information:

Environmental impacts
Economic impacts

Social and Cultural impacts
Legislation related to each topic

For example, you should be able to describe the environmental impacts of, the economic impacts of, and legislation related to pesticide use. Analyze each problem as if it were a generic system that you were trying to describe. Ask yourself what are the inputs (things going into the system), what is going on in the system, and what are the outputs (things leaving the system) of the system. These three things will make up the backbone of any free response question about an environmental problem.



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APES Exam Format Review Questions

1. Which of the following answer choices best represents the multiple choice portion of the APES Exam?
 - A) 50 questions in 50 minutes
 - B) 90 questions in 100 minutes
 - C) 90 questions in 90 minutes
 - D) 100 Questions in 100 minutes
 - E) 100 questions in 90 minutes

2. Which of the following represents the appropriate strategy for answering questions on the multiple choice portion of the APES exam?
 - A) Answer all of the multiple choice questions, do not leave any blank.
 - B) Start at the beginning and take your time. If you run out of time, it's better to take you time on the beginning of the test.
 - C) Go through the entire exam. Answer all of the questions that you know immediately, and then skip the rest.
 - D) Try to eliminate two answer choices, and then guess on the remaining three. It's OK to skip the ones you don't know.
 - E) Answer all of the easy questions first, then attempt some of the more difficult questions, and then skip the 15 most difficult questions.



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3. Which of the following represent the best strategy for answering “multiple-multiple choice” questions?

I. Read each of the Roman numeral answer choices, write true or false beside each one, and then choose the letter that corresponds with your true/false choices.

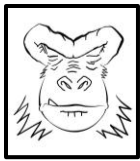
II. Start by reading each of the letter choices, and then go back to look at the Roman numeral choices.

III. It is not necessary to read the Roman numerals. Just look at the letter choices and make your decision.

- A) I only
- B) II only
- C) III only
- D) I and II only
- E) I and III only

4. Which of the following best represents the format of the free response-portion of the APES exam?

- A) 5 questions in 100 minutes
- B) 1 question in 60 minutes
- C) 4 questions in 90 minutes
- D) There is no free-response portion of the exam
- E) The number of questions varies, but you have 15 minutes to answer each one.



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5. Which of the following are good strategies for the free-response portion of the exam?

I. Begin with the easiest question first, and then work your way toward the more difficult questions.

II. Answer the question in the order that it was given to you.

III. Make sure that everything that you write is a direct response to the prompt. No flowery introductions, extra information, or restating the question.

- A) I only
- B) II only
- C) III only
- D) I and II only
- E) I, II, and III

Use the following answer choices to answer questions 6-10

- A) Document based question
- B) Rubric
- C) Complete sentences
- D) A Descriptive title
- E) Show your work

6. What should you always do when answering math questions on the APES exam?

7. Completing this successfully involves answering questions about a reading passage.

8. How should you write all of your answers on the free response portion of the exam?

9. What the most important thing to include if you are asked to draw a graph on the APES exam?

10. The tool that AP Exam graders use to “grade” the APES free response questions.



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Multiple Choice Scoring Guidelines

1. E	3. A	5. E	7. A	9. D
2. A	4. C	6. E	8. C	10. B

Multiple choice points earned/10 * 100 = Quiz average

(_____)/ 10 * 100 = _____ Quiz Grade