ADVANCED PLACEMENT
40th Anniversary

AP Macroeconomics

FREE-RESPONSE
Scoring Guide with Multiple-Choice Section

1995

Advanced Placement Program®
THE COLLEGE BOARD

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The Advanced Placement Examination in Macroeconomics

- The Entire 1995 Examination and Answer Key
- Sample Student Responses
- Statistical Information

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Welcome from the Advanced Placement Program

The Advanced Placement Program is now 40 years old! Since its creation by the College Board in 1955, it has offered more than seven million examinations to more than five million candidates around the world. These candidates are usually high school juniors or seniors who have taken an AP or equivalent college-level course while still in secondary school.

Students participate in the AP Program for several reasons. Some enjoy the opportunity to be challenged academically while still in high school. Others appreciate the chance to be exempt from the introductory level of a course once in college. Whatever the reason, participation in the AP Program provides an academically stimulating situation; it can also save a student money and time in college.

The validity and reliability of the AP Program are widely acknowledged. AP grades are now recognized by more than 3,100 two- and four-year colleges and universities in and outside the United States. These institutions offer advanced placement, course credit, or both to students who have successfully completed AP Exams. In addition, almost 1,500 of these institutions grant sophomore standing to students who have demonstrated their competence in three or more exams.

The AP Program is more than just examinations, however. It also actively promotes college-level instruction at the high school level, specifically in the form of AP courses, faculty workshops, and associated publications. The College Board periodically monitors college-level courses throughout the nation to ensure that AP courses reflect the best college instruction. Every summer the Board holds workshops for AP teachers from the more than 10,000 high schools that offer AP courses and examinations. Finally, the Board has made available almost 300 publications describing the Program's products and services.

In this publication we present to you the 1995 AP Macroeconomics Examination and its scoring standards. We have found that one of the best ways to become familiar with AP-level material and to optimize preparation for an AP Exam is to see what has appeared on prior exams, how students responded to the questions, and why the faculty consultants scored those responses the way they did. We hope this publication will be useful to you, and we wish you the best of luck.

Walt MacDonald

Walt MacDonald
Director
Advanced Placement Program

Chapter I

Introduction

The Advanced Placement Program of the College Board aims to improve the nation's quality of education and to facilitate students' transition from secondary school to college. Through its committees of educators, the AP Program provides course descriptions and examinations in 16 disciplines so that secondary schools may offer their students the stimulating challenge of college-level study culminating in an exam that measures college-level achievement. Many of the examinations cover the equivalent of a full-year college course. However, the AP Macroeconomics Examination is based on a one-semester college course, and so most students taking the AP Macroeconomics Examination have had a one-semester course in preparation.

■ DEVELOPING THE MACROECONOMICS EXAM

At least two years are generally needed to develop each Advanced Placement Examination. In the case of macroeconomics, the process starts when the College Board, working with test development specialists at Educational Testing Service (ETS), appoints an AP Economics Development Committee composed of six teachers from secondary schools, colleges, and universities in different parts of the country. This committee is responsible for developing both the AP Microeconomics and AP Macroeconomics Examinations. Committee members typically serve for a period of three years; the chief faculty consultant in economics serves *ex officio* on the committee and attends all meetings.

The test development process begins with committee members — as well as other college professors — independently writing questions for both the multiple-choice and free-response sections of the examination. The questions are collected and reviewed by ETS test specialists.

The multiple-choice questions are then assembled into draft "pretests" by ETS specialists for review by committee members during one of the two or three committee meetings which occur during the year. These pretests closely match the composition of Section I of an actual AP Macroeconomics Examination. Following committee review and revisions, the pretests are administered to students in introductory macroeconomics courses at colleges and universities across the United States. The pretests are scored at ETS and each question is categorized by its level of difficulty and how well it discriminated between more-able and less-able students.

Using questions from a number of pretests, ETS test specialists assemble draft Section I examinations which are reviewed and revised at future committee meetings. The level of difficulty of the examinations is controlled by selecting a variety of questions at different levels of difficulty, and by embedding equating items in each test that have appeared in an earlier form of the examination.

Questions appearing in Section II of the examination follow a different development path. ETS test specialists prepare pools of draft questions; the AP Economics Development Committee selects sets of free-response questions well in advance of their administration, and the committee reviews and revises them periodically to ensure that they are of the highest possible quality when they are eventually administered.

In the last stage of development, committee members give final approval on all multiple-choice and free-response questions when the questions are in "camera-ready" form. This takes place several months prior to the administration of the examination.

Regardless of type, each question appearing on the AP Macroeconomics Examination has undergone careful consideration regarding its appropriateness, level of difficulty, and ability to distinguish gradations of achievement. The committee members who are Advanced Placement high school teachers offer valuable advice regarding realistic expectations when matters relating to coverage of material, knowledge of terms, and clarity of phrasing are addressed. The college and university faculty members contribute their own perspectives, ensuring that the questions that are approved and accepted are at the appropriate level of

difficulty for an introductory college course in Macroeconomics. The chief faculty consultant considers difficulties that might interfere with reliable scoring of a free-response question. In addition, ETS consultants provide advice and guidance.

■ GRADING STANDARDS

Grading AP Examinations is a unique enterprise: the size and complexity of the Reading are on a scale unlike any other essay assessment in this country; the evaluation requires special and demanding procedures designed to produce equitable and consistent evaluations of performance. While the multiple-choice sections of the exams are scored by computer, the free-response sections require the involvement of about 3,400 college professors and AP teachers who have been carefully selected on the basis of their education, experience, and association with the AP Program. Several hundred thousand examinations containing more than three million student answers are evaluated. In addition, several hundred individuals provide professional and clerical support at the three or more sites that are required to accommodate the six-day Reading.

While pride in accomplishing this huge task is justifiable, the essential concern of the Advanced Placement Program is that all students receive grades that demonstrate their achievement fairly and accurately. Thus, the following procedures are used to ensure that grading standards are applied fairly to all papers.

■ The conscientious development of scoring standards. The preparation of standards for an examination begins when the Development Committee reviews and approves the examination, which may be as much as two years before the Reading. After the exam has been administered, the standards are refined by faculty consultants who have experience working with actual candidate answers.

■ The use of carefully developed scoring scales. Each question has an associated scoring scale designed to allow faculty consultants to make distinctions among answers. The scales — from 0 to 9 or 0 to 5 — avoid the problem of too few points, which allows only coarse distinctions, and the problem of too many points, which requires overly refined, often meaningless discriminations. Because the standards and their accompanying scales are tailored to individual questions, they allow each answer to be appropriately ranked.

■ The rigorous review of the scoring standards and their internalization by all AP faculty consultants. Three to seven hours of the six-day Reading period are devoted to reviewing the standards and making sure that they are applied consistently. The objective is to meld two essential components: (1) each faculty consultant's professional assessment of the answers, and (2) the scoring standards developed by the Reading group. In this way, an accurate and uniform assessment of student responses is achieved.

■ Minimization of the possibility of the "halo effect." The "halo effect" (giving an answer a higher or lower grade than it deserves because of good or poor impressions of other answers by the same student) is minimized by following three practices: (1) having each question read by a different faculty consultant, (2) completely masking all scores given by other faculty consultants, and (3) covering the candidate's identification information. Using these practices permits each faculty consultant to evaluate essay answers without being prejudiced by knowledge about individual candidates. Having three faculty consultants assess different questions within a given exam ensures that each answer is judged solely on its own merit.

■ The close monitoring of scoring standards. Scoring standards are developed and monitored using a variety of methods that minimize the chances that students would receive different grades if their answers were read by different faculty consultants. One method is to have a second faculty consultant independently score exams that have been previously read; another is to have the faculty consultant reread exams that he or she has previously read. In either instance, if the disparity between the resulting scores is too great, the individuals involved resolve the differences. These are just two of the methods used to maintain the scoring standards. Taken as a whole, the procedures ensure that each candidate receives an accurate estimate of her or his demonstrated achievement on the AP Examination.

■ EXAMINATION STANDARDS

The AP Exam in Macroeconomics contains a 70-minute multiple-choice section, and a 50-minute free-response section. The inclusion of both types of question ensures that the full range of a student's abilities is evaluated.

Multiple-choice questions have the unique ability to cover the breadth of a curriculum. They have three other strengths: high reliability, controlled level of difficulty, and the possibility of establishing comparability with earlier examinations. Reliability, or the likelihood that candidates taking a different form of the examination will receive the same scores, is controlled more effectively with multiple-choice questions than with free-response questions.

Maintaining a specified distribution of multiple-choice questions at appropriate levels of difficulty ensures that the measurement of differences in students' achievement is optimized. For AP Examinations, the most important distinctions among students are between the grades of 2 and 3, and 3 and 4. These distinctions are usually best accomplished by using many questions of middle difficulty.

Comparability of scores on the multiple-choice sections of a current and a previous examination is provided by incorporating a given number of items from an earlier examination within the current one, thereby allowing comparisons to be made between the scores of the earlier group of candidates and the current group. This information is used, along with other data, by the chief faculty consultant to establish AP grades that reflect the competence demanded by the Advanced Placement Program and that compare with earlier grades.

An AP Macroeconomics Examination would not, however, be able to evaluate the full range of a student's abilities without the use of **free-response questions**. Multiple-choice questions can measure a student's knowledge of facts, concepts, theories of macroeconomics, and even an understanding of typical graphs, measuring a student's ability to use macroeconomics tools learned in the classroom to solve problems in the economy. To explain the relationship between different economic components, and to use analytic and organizational skills, however, the free-response format provides better assessment of the student's ability.

In the free-response section of the Macroeconomics Examination, candidates are required to answer three questions. In the first question the candidates are generally required to interrelate different content areas, to analyze a given economic situation, and to set forth and evaluate general macroeconomic policies. The second two questions tend to be more limited to one content area and focus on one or two macroeconomic concepts. In all cases students should be encouraged to use graphical analysis wherever possible. (Beginning with the 1996 examinations, students may be *required* in some questions to use graphical analysis in answering the question.) Students are expected, in this section, to explain why things happen or to explain the transition mechanism, rather than to simply assert that something does happen.

The free-response and multiple-choice sections are designed to complement each other and to meet the overall course objectives and examination specifications. The questions in each section are analyzed both individually and collectively after each administration, and the conclusions are used to improve the examination for the next administration.

■ STUDENT PREPARATION

Since the AP Macroeconomics curriculum mirrors a typical one-semester college-level introductory class, students should use an appropriate college-level text. They should develop and apply critical thinking skills with a strong emphasis on cause-effect relationships. They should also be able to analyze data and to use graphs to demonstrate basic concepts and to support sophisticated economic reasoning. Teachers can help students develop these skills by having them write answers to free-response questions and give oral presentations that require the students to apply macroeconomic concepts to problems — both real world and hypothetical — and to participate in debates on conflicting theories. Requiring the inclusion of and the explanation for appropriate economic models helps students distinguish between the various models of macroeconomic theory. When using a graph to help answer a question or evaluate an economic problem, students should use the appropriate graph, label it correctly, and indicate clearly any shifts in the curves that may occur as a result of either changes in the economy or their recommendations. For both the long and short free-response questions, it is important that students read the questions carefully and take a few minutes to briefly outline their response to the question, making sure they have covered all of points asked for in the question.

Samples of student writing for the AP Macroeconomics Examination, the guides used by faculty consultants to evaluate such writing, and rationales for the

scores each short answer or essay received, are available in the published examinations for AP Macroeconomics, such as the one included here (1995) and the one published in *The 1990 Advanced Placement Examinations in Economics and Their Grading*. The multiple-choice questions from the 1995 and 1990 AP Microeconomics Exams are also included in these publications. In addition, sample multiple-choice and essay questions are published each year in the Advanced Placement Course Description in Economics. The free-response section of the examination is released each year after the examination has been given.

Other materials available for teachers of AP Macroeconomics courses include: the *Teacher's Guide to AP Courses in Macroeconomics*, which gives resource information for teaching an Advanced Placement course, including sample high school and college curriculums and extensive bibliographies; and copies of the 1990 and 1995 AP Macroeconomics Examinations in sets of 10 for classroom use.

To order any of these items, or to order more copies of this publication, please use the order form at the back of this booklet.

Chapter II

The 1995 AP Macroeconomics Examination

■ OVERVIEW

This booklet contains the entire 1995 AP Macroeconomics examination: Section I (multiple-choice) and Section II (free-response). The format of this year's examination is identical to the format introduced in 1993.

The first section contains 60 multiple-choice questions covering the following content areas: basic economic concepts, measurement of economic performance, national income and price determination, and international economics and growth. Most of the multiple-choice questions are designed to challenge a student's analytical ability rather than to test simple factual recall, although basic economic literacy questions may be included as appropriate based upon the content of the examination. The multiple-choice portion of the examination counts for two-thirds of the total grade.

The second section of the examination (which contributes one-third of the total examination score) contains three mandatory questions. The first question counts for 50 percent of the Section II score. Each of the other two questions accounts for 25 percent of the Section II score.

Examination Structure

The number of questions in each section of the 1995 AP Macroeconomics Examination, and the time allowed to administer them are summarized below:

Multiple-Choice (Section I)

60 questions . . . . 70 minutes

Free-Response (Section II)

3 questions* . . . . 50 minutes

*The first free-response question was graded on a 0 to 9-point scale (9 being the top score), and each of the other two questions was graded on a 0 to 5-point scale (5 being the top score).

Chapter III includes the scoring guides that the faculty consultants used to grade the 1995 essays, as well as sample student responses representing different scores on the grading scales.

■ THE RELEASED EXAM

Pages 7 and 8 contain the instructions, as printed in the 1995 *Coordinator's Manual*, for administering the AP Macroeconomics Examination. Following the instructions is a copy of the actual 1995 AP Macroeconomics Examination. If you wish to use this exam to test your students, you may use these instructions to create an exam environment that resembles a national administration.

Read aloud the directions that are shaded and set in boldface. All other instructions are for the person administering the test and need not be read aloud. You will find that some instructions — such as those referring to the date, the time, and page numbers — are no longer relevant; please ignore them.

■ INSTRUCTIONS FOR ADMINISTERING THE EXAM (from the 1995 *Coordinator's Manual*)

After completing the general instructions that begin on page 27, say:

It is Tuesday morning, May 9, and you will be taking the AP Macroeconomics Exam. Please print your name, last name first, on the front cover of the unsealed Section I booklet. . . . Now read the directions on the back of the booklet. When you have finished, look up. . . . Now look over your answer sheet carefully and check to see that you have provided the information requested and marked your responses correctly. . . . Because your answer sheet will be scored by machine, remember that improper gridding of your answer sheet may alter your grade. Use *only* no. 2 pencils to mark your answers on Section I. Mark all your responses on side 1 of your answer sheet (one response per question). Be certain that the number of the question you are answering matches the number on the answer sheet. Make sure that each of your answer marks is dark and fills the oval completely. Because stray marks and smudges may be read as answers by the machine, erase carefully and completely.

You are to work only on Section I until time is called. Do not open the sealed Section II booklet until you are told to do so. Remember that when you come to the end of the multiple-choice questions in Section I, there will still be answer ovals left on your answer sheet. Are there any questions?

Answer all questions regarding procedure. Set your watch at 7:59. When it reads exactly 8:00, say:

Open your Section I booklet and begin work.

While the candidates are working on Section I, you and your proctors should make sure that they are marking answers on their answer sheets in pencil and are not looking at their Section II booklets.

——AT 9:10——

Please stop working. Close your exam booklet and keep it closed on your desk. Check to see that you printed your name, last name first, on the front cover of your Section I booklet. . . . Please do *not* insert your answer sheet in the booklet. I will now collect the answer sheets.

After you have collected an answer sheet from every candidate, say:

Please seal the Section I booklet shut with the three seals provided. Pull off each seal from the backing sheet, press it on the front cover so it just covers the area marked "PLACE SEAL HERE," fold it over the open edge, and press it to the *back* cover. Use one seal for each open edge. Be careful not to let the seals touch anything except the marked areas. . . .

Collect the sealed Section I exam booklets. After you have collected a sealed booklet from every candidate, say:

Turn to the back cover of the sealed Section II booklet, and read the instructions at the upper left. . . . Print your identification information in the boxes, using a pen with black or dark-blue ink. . . . Next, taking care not to tear the sheet beneath the cover, detach the two perforated sides at the top. . . . Fold the flap down, and moisten and press the glue strip firmly along the entire lower edge. . . . Your identification information should be covered now and will not be known by those scoring your answers.

Read the instructions at the upper right of the back cover. Print your initials in the three boxes provided. . . . Next, take two AP number labels from your Candidate Pack and place the numbers in the two bracketed areas, one below the instructions and one to the left. If you don't have number labels left, carefully copy your number from the back cover of your Candidate Pack within both of the bracketed areas. . . . Item 6 provides you with the option of giving permission to Educational Testing Service to use your free-response materials for educational research and instructional purposes. Your name would not be used in any way in connection with the free-response materials. Please read the statement and answer either "yes" or "no." . . . Are there any questions?

Answer all questions regarding procedure. Then say:

> If you will be taking another AP Examination, I will now collect your Candidate Pack. You may keep your Candidate Pack if this is your last or only AP Examination.

Collect the Candidate Packs. Then say:

> Read the directions for Section II on the back of the booklet. Please look up when you have finished. Are there any questions?

Answer all questions regarding procedure. Then say:

> You have 50 minutes to answer all three questions in Section II. It is suggested that you spend approximately 25 minutes on the first question and divide the remaining time about equally between the last two questions. This suggestion will not be announced again, and you may proceed freely from one question to the next. You are responsible for pacing yourself.

Answer all questions regarding procedure. (Underlined instructions should not be read aloud during a late administration.) Set your watch at 9:09. When it reads exactly 9:10, say:

> Open the Section II booklet. Carefully tear out the insert in the center of the booklet. You may use the insert for notes, but write all your answers on the lined pages in the Section II booklet. . . . Begin work on Section II.

You and your proctors should check to be sure that all candidates are writing their answers in the Section II booklets.

——AT 10:00——

> Please stop working. Close your Section II booklet and keep it face up on your desk. I will now collect your booklets. Please remain in your seats, without talking, while the exam materials are being collected.

Collect the Section II booklets. Be sure you have one from every candidate, and check the back of each booklet to see that the candidate's AP number appears in the two boxes. Students may keep the inserts. When all the exam materials have been collected, you may dismiss the candidates.

Fill in the necessary information for the Macroeconomics Examination on the appropriate S&R Form. Alternate exams for late administration should be recorded only on the S&R Form for alternate exams. Then put the exam materials in locked storage until they are returned to ETS in one shipment after your school's last administration. See "Activities After the Exam."

MACROECONOMICS

Two hours are allotted for this examination: 1 hour and 10 minutes for Section I, which consists of multiple-choice questions; and 50 minutes for Section II, which consists of three mandatory essay questions. Section I is printed in this examination booklet. Section II is printed in a separate booklet.

SECTION I

Time — 1 hour and 10 minutes

Number of questions — 60

Percent of total grade — 66 2/3

Section I of this examination contains 60 multiple-choice questions. Therefore, please be careful to fill in only the ovals that are preceded by numbers 1 to 60 on your answer sheet.

General Instructions

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE INSTRUCTED TO DO SO.

INDICATE ALL YOUR ANSWERS TO QUESTIONS IN SECTION I ON THE SEPARATE ANSWER SHEET. No credit will be given for anything written in this examination booklet, but you may use the booklet for notes or scratchwork. After you have decided which of the suggested answers is best, COMPLETELY fill in the corresponding oval on the answer sheet. Give only one answer to each question. If you change an answer, be sure that the previous mark is erased completely.

Example:

Chicago is a
(A) state
(B) city
(C) country
(D) continent
(E) village

Sample Answer

Ⓐ ● Ⓒ Ⓓ Ⓔ

Many candidates wonder whether or not to guess the answers to questions about which they are not certain. In this section of the examination, as a correction for haphazard guessing, one-fourth of the number of questions you answer incorrectly will be subtracted from the number of questions you answer correctly. It is improbable, therefore, that mere guessing will improve your score significantly; it may even lower your score, and it does take time. If, however, you are not sure of the correct answer but have some knowledge of the question and are able to eliminate one or more of the answer choices as wrong, your chance of getting the right answer is improved, and it may be to your advantage to answer such a question.

Use your time effectively, working as rapidly as you can without losing accuracy. Do not spend too much time on questions that are too difficult. Go on to other questions and come back to the difficult ones later if you have time. It is not expected that everyone will be able to answer all the multiple-choice questions.

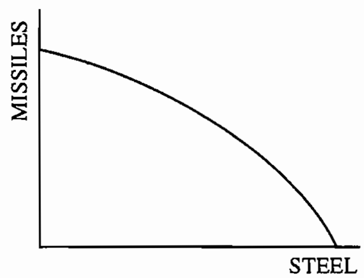
MACROECONOMICS

SECTION I

Time — 70 minutes

60 Questions

Directions: Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the one that is best in each case and then fill in the corresponding oval on the answer sheet.



1. Which of the following would cause the production possibilities curve shown above to shift outward?

   (A) Reopening steel plants that had been closed
   (B) Rehiring laid-off steelworkers
   (C) Using machinery for missile production instead of steel production
   (D) Using machinery for steel production instead of missile production
   (E) Developing a more efficient steelmaking process

2. If in a specified year nominal gross domestic product grew by 11 percent and real gross domestic product grew by 4 percent, inflation for this year would be

   (A) −7%
   (B) 7%
   (C) 8%
   (D) 11%
   (E) 15%

3. Which of the following is an example of structural unemployment?

   (A) A computer programmer who leaves her job to move to Florida
   (B) A worker who loses his job during a recession
   (C) An autoworker who is replaced by a robot
   (D) A construction worker who is always unemployed during the winter months
   (E) A worker who is engaged in unproductive work

4. What would be the effect of a large increase in labor productivity on the real gross domestic product and the price level?

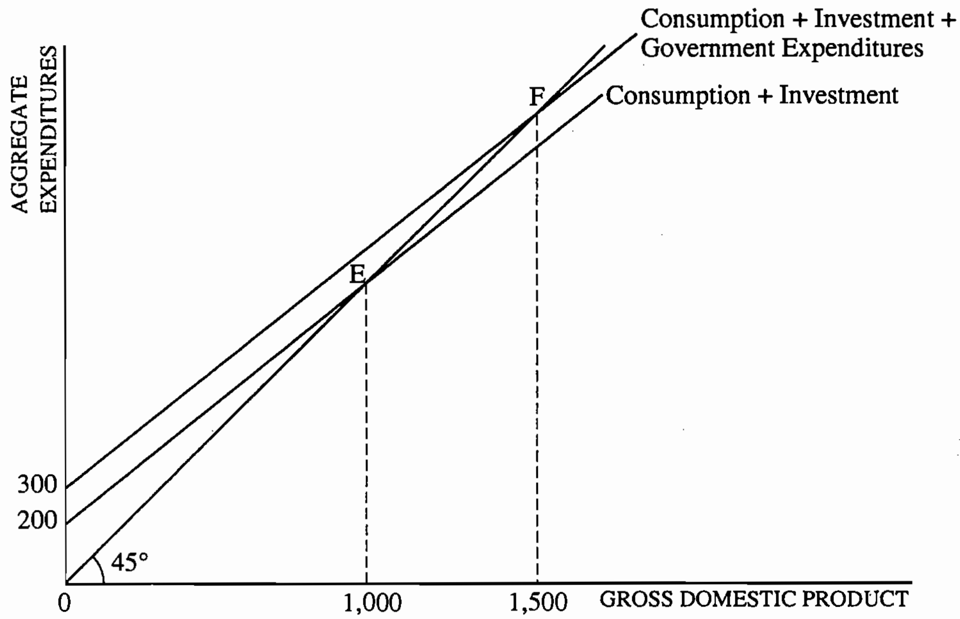
	Real Gross Domestic Product	Price Level
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	No effect	Increase
(D)	Decrease	Increase
(E)	Decrease	Decrease

5. An increase in which of the following will increase the value of the spending multiplier?

   (A) The supply of money
   (B) Equilibrium output
   (C) Personal income tax rates
   (D) The marginal propensity to consume
   (E) The required reserve ratio

6. According to the Keynesian model, which of the following would increase aggregate demand?

   (A) An increase in autonomous investment
   (B) An increase in the discount rate
   (C) A decrease in unemployment compensation payments
   (D) A decrease in government expenditures accompanied by an equal reduction in taxes
   (E) A decrease in government expenditures on public works



7. The graph above indicates equilibrium at E for a closed economy without government spending. If the addition of government spending results in equilibrium at F, which of the following is true?

(A) Government spending is \$300 and the multiplier is 5.
(B) Government spending is \$100 and the multiplier is 5.
(C) Government spending is \$100 and consumption increases by \$500.
(D) Government spending and gross domestic product increase by \$500 each.
(E) Consumption and gross domestic product increase by \$500 each.

8. Commercial banks can create money by

   (A) transferring depositors' accounts at the Federal Reserve for conversion to cash
   (B) buying Treasury bills from the Federal Reserve
   (C) sending vault cash to the Federal Reserve
   (D) maintaining a 100 percent reserve requirement
   (E) lending excess reserves to customers

9. If the reserve requirement is 20 percent, the existence of $100 worth of excess reserves in the banking system can lead to a maximum expansion of the money supply equal to

   (A) $20
   (B) $100
   (C) $300
   (D) $500
   (E) $750

10. If the Federal Reserve lowers the reserve requirement, which of the following would most likely occur?

    (A) Imports will rise, decreasing the trade deficit.
    (B) The rate of saving will increase.
    (C) Unemployment and inflation will both increase.
    (D) Businesses will purchase more factories and equipment.
    (E) The budget deficit will increase.

11. If the public's desire to hold money as currency increases, what will the impact be on the banking system?

    (A) Banks would be more able to reduce unemployment.
    (B) Banks would be more able to decrease aggregate supply.
    (C) Banks would be less able to decrease aggregate supply.
    (D) Banks would be more able to expand credit.
    (E) Banks would be less able to expand credit.

12. According to Keynesian theory, decreasing taxes and increasing government spending will most likely change consumption expenditures and unemployment in which of the following ways?

	Consumption Expenditures	Unemployment
(A)	Decrease	Increase
(B)	Decrease	No change
(C)	Increase	Decrease
(D)	Increase	Increase
(E)	No change	Decrease

13. Which of the following policy combinations is most likely to cure a severe recession?

	Open-Market Operations	Taxes	Government Spending
(A)	Buy securities	Increase	Decrease
(B)	Buy securities	Decrease	Increase
(C)	Buy securities	Decrease	Decrease
(D)	Sell securities	Decrease	Decrease
(E)	Sell securities	Increase	Increase

14. In an economy at full employment, a presidential candidate proposes cutting the government debt in half in four years by increasing income tax rates and reducing government expenditures. According to Keynesian theory, implementation of these policies is most likely to increase

(A) unemployment
(B) consumer prices
(C) aggregate demand
(D) aggregate supply
(E) the rate of economic growth

15. To protect high-cost domestic producers, a country imposes a tariff on an imported commodity, Y. Which of the following is most likely to occur in the short run?

I. A decrease in domestic production of Y
II. An increase in domestic production of Y
III. An increase in foreign output of Y

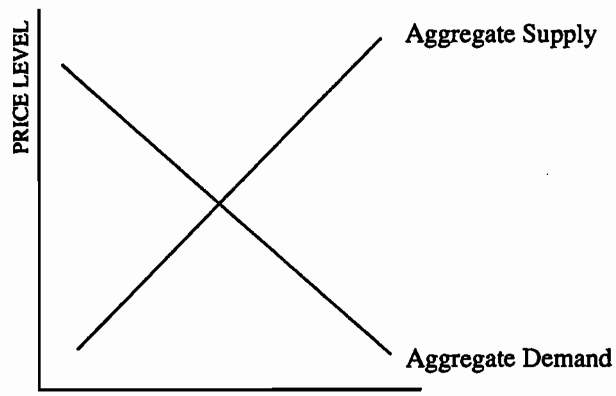
(A) I only
(B) II only
(C) III only
(D) I and III only
(E) II and III only

16. Suppose two countries are each capable of individually producing two given commodities. Instead, each specializes by producing the commodity for which it has a comparative advantage and then trades with the other country. Which of the following is most likely to result?

(A) The two countries will become more independent of each other.
(B) Unemployment will increase in one country and decrease in the other.
(C) There will be more efficient production in one country but less efficient production in the other.
(D) Both countries will become better off.
(E) Both countries will be producing their commodity inefficiently.

17. Which of the following means of reducing military spending would have the greatest positive impact on gross domestic product for the United States?

(A) Combining two domestic military bases into one overseas base
(B) Cutting retirement benefits to military personnel
(C) Closing overseas military bases and relocating those operations to the United States
(D) Closing overseas military bases and laying off military personnel
(E) Canceling contracts with domestic producers for new airplanes



18. According to the graph above, which of the following will necessarily result in a decrease in output?

I. A rightward shift of the aggregate demand curve
II. A leftward shift of the aggregate demand curve
III. A rightward shift of the aggregate supply curve
IV. A leftward shift of the aggregate supply curve

(A) I only
(B) III only
(C) I and III only
(D) II and III only
(E) II and IV only

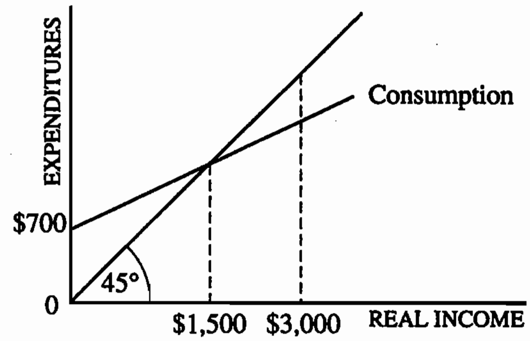
19. Which of the following will result in the greatest increase in aggregate demand?

    (A) A $100 increase in taxes
    (B) A $100 decrease in taxes
    (C) A $100 increase in government expenditures
    (D) A $100 increase in government expenditures, coupled with a $100 increase in taxes
    (E) A $100 increase in government expenditures, coupled with a $100 decrease in taxes

20. If the economy is in a severe recession, which of the following is the fiscal policy most effective in stimulating production?

    (A) Government spending increases.
    (B) Government spending decreases.
    (C) Personal income taxes are increased.
    (D) The Federal Reserve sells bonds on the open market.
    (E) The Federal Reserve buys bonds on the open market.

<u>Questions 21-22</u> refer to the diagram below, which depicts an economy's consumption function.



21. If the marginal propensity to consume increases, the equilibrium levels of income and consumption will change in which of the following ways?

	Equilibrium Level of Income	Equilibrium Level of Consumption
(A)	No change	No change
(B)	No change	Increase
(C)	Increase	No change
(D)	Increase	Increase
(E)	Decrease	Decrease

22. If private investment of $100 is added to the economy, the equilibrium levels of income and consumption will change in which of the following ways?

	Equilibrium Level of Income	Equilibrium Level of Consumption
(A)	Increase	Decrease
(B)	Increase	Increase
(C)	Increase	No change
(D)	No change	Increase
(E)	No change	No change

23. The real value of the United States dollar is determined by

(A) federal regulations regarding purchasing power
(B) the value of the gold backing the dollar
(C) the goods and services it will buy
(D) the money multiplier
(E) the marginal propensity to consume

24. The demand for money increases when national income increases because

(A) spending on goods and services increases
(B) interest rates increase
(C) the budget deficit increases
(D) the money supply increases
(E) the public becomes more optimistic about the future

25. An aggregate supply curve may be horizontal over some range because within that range

(A) a higher price level leads to higher interest rates, which reduce the money supply and consumer spending
(B) changes in the aggregate price level do not induce substitution
(C) output cannot be increased unless prices and interest rates increase
(D) rigid prices prevent employment from fluctuating
(E) resources are underemployed and an increase in demand will be satisfied without any pressure on the price level

26. If the Federal Reserve wishes to use monetary policy to reinforce Congress' fiscal policy changes, it should

(A) increase the money supply when government spending is increased
(B) increase the money supply when government spending is decreased
(C) decrease the money supply when government spending is increased
(D) increase interest rates when government spending is increased
(E) decrease interest rates when government spending is decreased

27. Which of the following relationships is illustrated by a short-run Phillips curve?

(A) A decrease in the rate of inflation is accompanied by an increase in the rate of economic growth.
(B) A decrease in the rate of inflation is accompanied by an increase in the rate of unemployment.
(C) An increase in the rate of inflation is accompanied by a decrease in the rate of economic growth.
(D) An increase in the rate of inflation is accompanied by an increase in the rate of unemployment.
(E) A decrease in the rate of economic growth is accompanied by a decrease in the rate of unemployment.

28. Which of the following could cause simultaneous increases in inflation and unemployment?

(A) A decrease in government spending
(B) A decrease in the money supply
(C) A decrease in the velocity of money
(D) An increase in inflationary expectations
(E) An increase in the overall level of productivity

29. If other things are held constant, an increase in United States imports will

(A) tend to cause the dollar to appreciate because the world supply of dollars will rise
(B) tend to cause the dollar to appreciate because the world demand for dollars will rise
(C) have no effect on the exchange rate for the dollar because exports will also increase
(D) tend to cause the dollar to depreciate because the world supply of dollars will rise
(E) tend to cause the dollar to depreciate because the world demand for dollars will rise

30. An increase in which of the following is most likely to cause an improvement in the standard of living over time?

    (A) Size of the population
    (B) Size of the labor force
    (C) Number of banks
    (D) Level of taxation
    (E) Productivity of labor

31. The long-run aggregate supply curve is likely to shift to the right when there is

    (A) an increase in the cost of productive resources
    (B) an increase in productivity
    (C) an increase in the federal budget deficit
    (D) a decrease in the money supply
    (E) a decrease in the labor force

32. The consumer price index measures which of the following?

    (A) The change over time of the weighted prices of a particular group of goods and services
    (B) The change over time of the weighted wholesale price index
    (C) The change over time of the difference between the gross domestic product deflator and the wholesale price index
    (D) Inflation corrected for changes in the real gross domestic product
    (E) Inflation corrected for changes in the wholesale price index

33. Which of the following is true if the economy is producing at the full-employment level of output?

    (A) The unemployment rate is zero.
    (B) No person is receiving unemployment compensation from the government.
    (C) There is frictional unemployment.
    (D) The government's budget is balanced.
    (E) The balance of trade is in equilibrium.

34. Which of the following is a basic tenet of classical economic analysis?

    (A) Saving is usually greater than investment.
    (B) The economy is self-correcting to full employment.
    (C) The economy may be in equilibrium at less than full employment.
    (D) Inflation is not a serious economic problem.
    (E) The prices of products tend to be inflexible.

35. Which of the following will most likely result from a decrease in government spending?

    (A) An increase in output
    (B) An increase in the price level
    (C) An increase in employment
    (D) A decrease in aggregate supply
    (E) A decrease in aggregate demand

36. Current equilibrium output equals $2,500,000, potential output equals $2,600,000, and the marginal propensity to consume equals 0.75. Under these conditions, a Keynesian economist is most likely to recommend

    (A) decreasing taxes by $25,000
    (B) decreasing taxes by $100,000
    (C) increasing government spending by $25,000
    (D) increasing government spending by $33,333
    (E) increasing government spending by $100,000

37. An inflationary gap could be reduced by

    (A) an increase in government spending
    (B) an increase in the supply of money
    (C) an increase in the income tax rate
    (D) a decrease in the discount rate
    (E) a decrease in the reserve requirement

38. The circular flow of economic activity between consumers and producers includes which of the following?

    I. Households buy factor services from firms.
    II. Households sell factor services to firms.
    III. Households buy outputs from firms.
    IV. Households sell outputs to firms.

    (A) III only
    (B) IV only
    (C) I and II only
    (D) II and III only
    (E) III and IV only

39. Suppose the required reserve ratio is 20 percent and a single bank with no excess reserves receives a $100 deposit from a new customer. The bank now has excess reserves equal to

    (A) $20
    (B) $80
    (C) $100
    (D) $400
    (E) $500

40. Which of the following is most likely to increase if the public decides to increase its holdings of currency?

    (A) The interest rate
    (B) The price level
    (C) Disposable personal income
    (D) Employment
    (E) The reserve requirement

41. During a mild recession, if policymakers want to reduce unemployment by increasing investment, which of the following policies would be most appropriate?

    (A) Equal increases in government expenditure and taxes
    (B) An increase in government expenditure only
    (C) An increase in transfer payments
    (D) An increase in the reserve requirement
    (E) Purchase of government securities by the Federal Reserve

42. Which of the following monetary and fiscal policy combinations would most likely result in a decrease in aggregate demand?

	Discount Rate	Open-Market Operations	Government Spending
(A)	Lower	Buy bonds	Increase
(B)	Lower	Buy bonds	Decrease
(C)	Raise	Sell bonds	Increase
(D)	Raise	Buy bonds	Increase
(E)	Raise	Sell bonds	Decrease

43. Which of the following is true of supply shocks?

(A) They tend to change both relative prices and the general price level in the economy.
(B) They affect only the general price level.
(C) They can be anticipated and offset with appropriate fiscal policy.
(D) They can be anticipated and offset with appropriate monetary policy.
(E) They make the aggregate supply curve vertical.

44. Suppose that, from 1985 to 1986, unemployment fell from 7.2 to 7.0 percent and inflation fell from 3.8 to 1.1 percent. An explanation of these changes might be that the

(A) aggregate demand curve shifted to the left
(B) aggregate demand curve shifted to the right
(C) aggregate supply curve shifted to the left
(D) aggregate supply curve shifted to the right
(E) short-run Phillips curve shifted to the right

45. If higher United States interest rates cause foreign demand for the dollar to increase, which of the following will occur to the international value of the dollar and to United States exports?

	International Value of the Dollar	Exports
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Increase	No change
(D)	Decrease	Increase
(E)	Decrease	Decrease

46. The table below indicates the number of labor hours required in Countries X and Y to produce one unit of food or one unit of clothing.

Country	Food	Clothing
X	20 hours	50 hours
Y	10 hours	20 hours

Given this information, which of the following statements is correct?

(A) X has a comparative advantage in the production of both food and clothing.
(B) Y has a comparative advantage in the production of both food and clothing.
(C) X has a comparative advantage in food production, whereas Y has a comparative advantage in clothing production.
(D) Y has a comparative advantage in food production, whereas X has a comparative advantage in clothing production.
(E) Neither country has a comparative advantage in the production of either good.

47. Which of the following groups of people would benefit from unanticipated inflation?

I. Savers
II. Borrowers
III. Lenders

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

48. An increase in the labor force participation rate will

(A) increase investment and decrease savings
(B) increase savings and decrease investment
(C) have no effect on unemployment
(D) make it easier to reduce unemployment
(E) make it more difficult to reduce unemployment

49. Which of the following is a key feature of Keynesian economics?

(A) The level of saving depends mostly on interest rates.
(B) The level of government expenditure depends mostly on interest rates.
(C) Supply creates its own demand.
(D) Macroeconomic equilibrium can occur at less than full employment.
(E) Wages are more flexible than prices.

50. If a large increase in total spending has no effect on real gross domestic product, it must be true that

(A) the price level is rising
(B) the economy is experiencing high unemployment
(C) the spending multiplier is equal to 1
(D) the economy is in short-run equilibrium
(E) aggregate supply has increased

51. According to Keynesian theory, the most important determinant of saving and consumption is the

(A) interest rate
(B) price level
(C) level of income
(D) level of employment
(E) flexibility of wages and prices

52. Under which of the following circumstances would increasing the money supply be most effective in increasing real gross domestic product?

	Interest Rates	Employment	Business Optimism
(A)	High	Full	High
(B)	High	Less than full	High
(C)	Low	Full	High
(D)	Low	Full	Low
(E)	Low	Less than full	Low

53. Faced with a large federal budget deficit, the government decides to decrease expenditures and tax revenues by the same amount. This action will affect output and interest rates in which of the following ways?

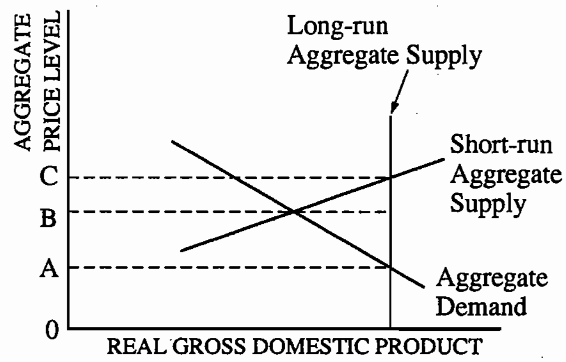
	Output	Interest Rates
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	No change	Decrease
(D)	Decrease	Increase
(E)	Decrease	Decrease

54. If crowding out only partially offsets the effects of a tax cut, which of the following changes in interest rates and gross domestic product are most likely to occur?

	Interest Rates	Gross Domestic Product
(A)	Increase	Increase
(B)	Increase	Remain unchanged
(C)	Increase	Decrease
(D)	Remain unchanged	Increase
(E)	Decrease	Decrease

55. All of the following are components of the money supply in the United States EXCEPT

(A) paper money
(B) gold bullion
(C) checkable deposits
(D) coins
(E) demand deposits



56. The graph above depicts an economy's aggregate demand and aggregate supply curves. If aggregate demand remains constant, the equilibrium price levels in the short run and in the long run will be which of the following?

	Short Run	Long Run
(A)	0A	0A
(B)	0B	0A
(C)	0B	0C
(D)	0C	0A
(E)	0C	0C

57. According to both monetarists and Keynesians, which of the following happens when the Federal Reserve reduces the discount rate?

(A) The demand for money decreases and market interest rates decrease.
(B) The demand for money increases and market interest rates increase.
(C) The supply of money increases and market interest rates decrease.
(D) The supply of money increases and market interest rates increase.
(E) Both the demand for money and the supply of money increase and market interest rates increase.

58. An increase in which of the following is most likely to increase the long-run growth rate of an economy's real per capita income?

(A) Population growth
(B) The proportion of gross domestic product consumed
(C) The educational attainment of the population
(D) The supply of money in circulation
(E) Personal income taxes

59. An increase in the money supply will have the greatest effect on real gross domestic product if

(A) the marginal propensity to consume is low
(B) unemployment is very low
(C) investment spending is not sensitive to changes in interest rates
(D) the quantity of money demanded is not very sensitive to interest rates
(E) the required reserve ratio is high

60. If the Federal Reserve undertakes a policy to reduce interest rates, international capital flows will be affected in which of the following ways?

(A) Long-run capital outflows from the United States will decrease.
(B) Long-run capital inflows to the United States will increase.
(C) Short-run capital outflows from the United States will decrease.
(D) Short-run capital inflows to the United States will decrease.
(E) Short-run capital inflows to the United States will not change.

The College Board
Advanced Placement Examination

MACROECONOMICS
SECTION II
Time — 50 minutes

MACROECONOMICS

SECTION II

Time — 50 minutes

Directions: You have fifty minutes to answer all three of the following questions. It is suggested that you take a few minutes to plan and outline each answer. Spend approximately half your time on the first question and divide the remaining time equally between the next two questions. In answering the questions, you should emphasize the line of reasoning that generated your results; it is not enough to list the results of your analysis. Include diagrams, if useful, in explaining your answers. All diagrams should be clearly labeled.

1. Over the past two years, the unemployment rate in Country X has risen from 5 percent to 9 percent. As the leader of Country X, you have been presented with two policy options to address the unemployment problem.

   Policy 1: Use tariffs and quotas to restrict imports and thus protect jobs in Country X.

   Policy 2: Use monetary and fiscal policies to solve the unemployment problem without resorting to trade restrictions.

   (a) Explain two disadvantages of selecting Policy 1.

   (b) Describe in detail one specific monetary policy action and one specific fiscal policy action you would take to reduce unemployment. Explain how each of these actions would affect each of the following in the short run.
      - (i) Aggregate demand
      - (ii) Output and the price level
      - (iii) Real interest rates

   (c) If the interest rate effects you identified in Part (b) continue in the long run, explain the impact of these effects on economic growth.

2. Assume that the economy is in a recession.

   (a) Explain each of the following.
      (i) Monetary and fiscal policies advocated by monetarists to eliminate the recession
      (ii) Monetary and fiscal policies advocated by Keynesians to eliminate the recession

   (b) Explain how monetarists and Keynesians differ in their conclusions about the effects of crowding out associated with the stabilization policies outlined in Part (a).

3. Explain how some individuals are helped and others harmed by unanticipated inflation as they participate in each of the following markets.

   (a) Credit markets
   (b) Labor markets
   (c) Product markets

Chapter III

Answers to the 1995 AP Macroeconomics Examination

■ SECTION I: MULTIPLE-CHOICE

Listed below are the correct answers to the multiple-choice questions and the percentage of AP candidates who attempted each question and answered it correctly. An answer sheet gridded with the correct responses appears on the next page.

Section I Answer Key and Percent Answering Correctly

Item No.	Correct Answer	Percent Correct	Item No.	Correct Answer	Percent Correct
1	E	83%	31	B	88%
2	B	87%	32	A	58%
3	C	71%	33	C	70%
4	B	73%	34	B	65%
5	D	71%	35	E	65%
6	A	54%	36	C	48%
7	B	61%	37	C	70%
8	E	82%	38	D	75%
9	D	65%	39	B	76%
10	D	71%	40	A	45%
11	E	61%	41	E	47%
12	C	84%	42	E	73%
13	B	86%	43	A	46%
14	A	79%	44	D	45%
15	B	76%	45	B	57%
16	D	90%	46	C	26%
17	C	79%	47	B	60%
18	E	81%	48	E	35%
19	E	85%	49	D	46%
20	A	79%	50	A	59%
21	D	56%	51	C	35%
22	B	48%	52	B	35%
23	C	76%	53	E	27%
24	A	61%	54	A	28%
25	E	61%	55	B	79%
26	A	73%	56	B	67%
27	B	59%	57	C	57%
28	D	45%	58	C	52%
29	D	65%	59	D	19%
30	E	85%	60	D	47%

PLACE AP® NUMBER LABEL HERE.

A. SIGNATURE To maintain the security of the exam and the validity of my AP grade, I will allow no one other than myself to see the multiple-choice questions and will seal the appropriate section when asked to do so. In addition, I am aware of and agree to the Program's policies and procedures as outlined in the 1995 *AP Bulletin for Students and Parents.*

Sign your name as it will appear on your college applications.

B. YOUR AP NUMBER

C. NAME Omit spaces, hyphens, apostrophes, Jr. or II.

Last Name - first 15 letters | First Name - first 12 letters | MI

D. ADMIN. DAY IN MAY

E. TIME OF DAY

6 AM, 7 AM, 8 AM, 9 AM, 10 AM, 11 AM, 12 PM, 1 PM, 2 PM, 3 PM, 4 PM, 5 PM

F. AP EXAMINATION(S) TO BE TAKEN USING THIS ANSWER SHEET

Print examination name: Economics: Macro

Fill in the appropriate oval below for examination name and number.

07	U.S. History	36	Eng. Language & Comp.	66	Math: Calculus AB
13	Art: History of	37	Eng. Literature & Comp.	68	Math: Calculus BC
14	Art: Studio Drawing	43	European History	75	Music Theory
15	Art: Studio General	48	French Language	78	Physics B
20	Biology	51	French Literature	80	Physics C: **Mech.**
25	Chemistry	55	German Language	80	Physics C: **E & M**
31	Computer Science A	57	Gov. & Pol.: **U.S.**	85	Psychology
33	Computer Science AB	58	Gov. & Pol.: **Comp.**	87	Spanish Language
34	Economics: **Micro**	60	Latin: Vergil	89	Spanish Literature
35 ●	Economics: **Macro**	60	Latin Literature		

G. What language do you know best?

- English
- English and another language about the same
- Another language

H. DO NOT COMPLETE THIS SECTION UNLESS INSTRUCTED TO DO SO.

H1. Essay Choices Fill in the ovals under the numbers of the essay questions you answered in this examination.

1 2 3 4 5 6
7 8 9 10 11 12

H2. If this answer sheet is for the French Language, French Literature, German Language, Spanish Language, or Spanish Literature Examination, please answer the following questions. (Your responses will not affect your grade.)

1. Have you lived or studied for one month or more in a country where the language of the exam you are now taking is spoken? Yes No
2. Do you regularly speak or hear the language at home? Yes No

SCHOOL USE ONLY

Fee Reduction Granted

Report to Teachers Section Designation 1 2 3 4 5 6 7 8 9

BE SURE EACH MARK IS DARK AND COMPLETELY FILLS THE INTENDED SPACE. IF A QUESTION HAS ONLY FOUR ANSWER OPTIONS, DO NOT MARK THE OPTION E.

Question	Marked	Question	Marked	Question	Marked
1	E	26	A	51	C
2	B	27	B	52	B
3	C	28	D	53	E
4	B	29	D	54	A
5	D	30	E	55	B
6	A	31	B	56	B
7	B	32	A	57	C
8	E	33	C	58	C
9	D	34	B	59	D
10	D	35	E	60	D
11	E	36	C		
12	C	37	C		
13	B	38	D		
14	A	39	B		
15	B	40	A		
16	D	41	E		
17	C	42	E		
18	E	43	A		
19	E	44	D		
20	A	45	B		
21	D	46	C		
22	B	47	B		
23	C	48	E		
24	A	49	D		
25	E	50	A		

Questions 61–135: Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ (unmarked)

ETS USE ONLY R W FS — PT1 PT2 PT3 PT4 TOT CO TA1 TA2

ETS USE ONLY Exam ① ② Exam ① ②

SIDE 1

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■ SECTION II: FREE-RESPONSE

Report of the Chief Faculty Consultant
Rae Jean Goodman
United States Naval Academy

The Development of Free-Response Questions

The first step in developing the free-response section of an AP Macroeconomics Exam is taken two years before the exam is administered, when committee members discuss the topic areas that have been covered in the recent past exams and decide which topic areas should be covered in the exam under construction. Each member selects questions for consideration by the whole committee.

From the proposed questions, in conjunction with the focus topic areas, the committee selects free-response questions for use in the AP Exam. The committee members discuss what information and economic analysis are important for a student to know for each particular question. The questions are then rewritten to conform to the consensus of the committee.

In preparation for the next committee meeting, each member prepares answers to the free-response questions. The committee as a whole discusses these answers and rewrites portions of a question if necessary. At this point, if there is consensus that a question is "just not working," the committee will seek a replacement question. The revised questions are put through the same process at the next committee meeting; further adjustments and refinements are made at this time.

The free-response questions are answered and discussed at two more meetings of the committee; it is at these two meetings that the committee forms possible grading standards. The questions are then administered in May to AP candidates. As an example, the time line for the free-response questions of the 1997 AP Macroeconomics Exam is:

Initial question selection	Spring 1995
First Review and Rewrite	Fall 1995
Second Review and Rewrite	Spring 1996
Third Review and Preliminary Standards	Fall 1996
Standards Discussed	Spring 1997
Exam Administered	May 1997

This process provides reasonable assurance that important topic areas will be covered, questions will offer sufficient direction without being overly prescriptive, and few free-response questions will "not work" when administered to the AP candidates.

Setting and Maintaining Standards

The development of the standards and procedures to ensure consistent scoring of the free-response sections of AP Examinations is vital to the success of the AP Program and acceptance of AP grades by colleges and universities. The goal of the process is to have all faculty consultants evaluate the students' responses fairly, uniformly, and according to the standards.

Prior to the June Reading, the chief faculty consultant uses the AP Economics Development Committee's input and samples of actual student responses to draft scoring standards and point allocation for each free-response question. Two days before the Reading begins, the chief faculty consultant, table leaders, and consultants from Educational Testing Service (ETS) meet at the Reading site. The table leaders review a set of sample student answers that they have received and develop ideas about the scoring standards to apply to those answers.

The table leaders for the macroeconomics questions, along with the chief faculty consultant and the ETS consultants, review and revise the preliminary standards and point allocation. The standards are applied to a sample of actual student answers. Scores are then assigned, by consensus, to these answers. This set of scoring standards will be used to train faculty consultants in evaluating the student responses.

The chief faculty consultant, microeconomics and macroeconomics table leaders, and ETS consultants meet to discuss and review the scoring standards for all AP Economics free-response questions. In general, the final wording of the scoring standards is completed at this time.

Following an introductory meeting, the Reading begins with a session to train all faculty consultants to apply a single set of scoring standards to each question consistently. The faculty consultants are divided into groups of five to eight among table leaders. The table leader provides each faculty consultant with a set of student responses and the scoring standard for the question which will be read by the particular table; several tables may score a single question.

The table leader and faculty consultants discuss the question and the correct answer to the question. The scoring standard is then explained and discussed, after which the faculty consultants apply the standard to the set of sample student responses. Scores for the samples are compared and discussed. At this point, the faculty consultants are learning the various levels of student ability which are reflected in the answers and the range of nuances consistent with each score.

The next step in the process is a "round robin": each faculty consultant is given an exam; everyone scores each exam; the scores are discussed and compared; and a consensus is reached. If there is more than one table scoring a question, the round robin is performed across the tables to ensure that all faculty consultants scoring a particular question are applying the same standard. The goal is a consistent and reliable application of the standards.

The original training is reinforced and checked in at least three ways. First, at the beginning of the second day of the Reading, each question is subjected to a round-robin check. This confirms that all the faculty consultants have retained the scoring standard training. Throughout the remainder of the Reading, at a rate of once a day, two additional types of checks are carried out: a self-check and a table-leader check. In a self-check, each faculty consultant is asked to rescore a set of three to five selected papers that he or she has previously scored, without seeing the original scores. When differences occur, the faculty consultant reconsiders the final score in consultation with the table leader. A table-leader check involves the table leader rescoring exams scored by faculty consultants at the table. Once again, when discrepancies occur, the table leader and faculty consultant confer. Many times these discussions expand to include all the faculty consultants at the table and the occasion is used as a learning experience.

When more than one table is scoring a question, to ensure consistency across tables, one table leader may rescore exams scored by faculty consultants at another table.

Throughout the training and the Reading, the faculty consultants are reminded of several guiding principles. First, they are encouraged to use the full range of the grading scale. They are also reminded that the highest score should be applied to excellent, not necessarily perfect, responses. Faculty consultants are trained to discuss a problematic student response with either other consultants at the table and/or the table leader. This leads to multiple evaluations of problematic student responses and a final determination may be made by the chief faculty consultant.

As in all AP scoring procedures, the faculty consultant does not know the name of the student nor are the scores for other questions on the exam seen. A faculty consultant evaluates only one question on a particular student's exam. All of these measures are designed to provide fair and consistent scoring of a student's responses.

The Reading

In June of 1995, 45 secondary school, college and university economics teachers met at Trenton State College in Trenton, New Jersey, to read and evaluate over 37,000 free-response essays written by more than 12,500 AP Macroeconomics candidates. The faculty consultants are experienced economics instructors of either undergraduate introductory economics courses or of AP courses in secondary schools. Approximately 25% of the faculty consultants were new to the AP Reading in 1995. The faculty consultants reflect the different geographic regions, types of institutions, and racial and ethnic groups of the candidates and institutions which participate in the AP Program.

The macroeconomics faculty consultants were divided into three groups, each assigned to read one of the three essays. The largest number, twenty-four, were allotted to read the long macro question; thirteen were allocated to read Question 2; and eight were assigned to Question 3. The aim of the chief faculty consultant is to distribute the faculty consultants in the correct proportion so that any one reader reads only one question throughout the Reading. If this objective is met, the reliability of the evaluation should be maintained because consensus on the scoring standards will be reached among fewer people, and the Reading will be more efficient because time will not be taken to retrain faculty consultants to score a second question.

General Comments

This is the third year of the three-question format for the AP Macroeconomics Examination. There was agreement that the questions were generally of high quality and difficulty, but at the same time were fair and addressed content that is fundamental to macroeconomic principles courses in universities and colleges nationwide; the procedures for evaluation were well developed and carefully implemented. The questions focused on relevant subjects and required

macroeconomic analysis. The long question involved stabilization policies, the short-run impact on macroeconomic variables, and the long-run impact of the policies on economic growth. The second question involved the policy prescriptions of two major schools of thought: Keynesian and monetarist. The third question focused on the economic effects of unanticipated inflation.

Graphical analysis is an important tool for economists and, thus, the better answers usually use graphs to supplement the verbal analysis. Through 1995, graphical analysis was not required for the AP Macroeconomics Examination, although in the scoring process graphs could help a student. If a student graphically demonstrated correct knowledge which was not discussed in the verbal presentation, the student received credit. Beginning in 1996, graphical analysis may be required on the AP Macroeconomics Exam.

The sample student responses that follow are reproduced in their original format, unedited for grammar, spelling or punctuation. All are used with the permission of the students, who understood that their responses might be published at a later date. When reading these responses, keep in mind that they were written under exam conditions and within a time limit and that the responses were, in part, selected for legibility. You are not seeing the full range of penmanship or writing skills seen by the faculty consultants.

Free-Response Question 1

Over the past two years, the unemployment rate in Country X has risen from 5 percent to 9 percent. As the leader of Country X, you have been presented with two policy options to address the unemployment problem.

Policy 1: Use tariffs and quotas to restrict imports and thus protect jobs in Country X.
Policy 2: Use monetary and fiscal policies to solve the unemployment problem without resorting to trade restrictions.

(a) Explain two disadvantages of selecting Policy 1.
(b) Describe in detail one specific monetary policy action and one specific fiscal policy action you would take to reduce unemployment. Explain how each of these actions would affect each of the following in the short run.
   (i) Aggregate demand
   (ii) Output and the price level
   (iii) Real interest rates
(c) If the interest rate effects you identified in Part (b) continue in the long run, explain the impact of these effects on economic growth.

Question 1 Scoring Guide

Basically the point distribution is 2 points for Part (a); 5 for Part (b); and 2 for Part (c).

Part (a): 2 points
Two disadvantages to tariffs and quotas may include:
- domestic prices will rise resulting in a lower standard of living;
- trade war/retaliation resulting in increased domestic prices and unemployment;
- if foreign income decreases due to lost domestic market of Country X, resulting in a decreased demand for exports of Country X, then unemployment in Country X will increase;
- increase in unemployment in import dependent industries;
- loss of economic efficiency (comparative advantage explanation);
- reduced competition in Country X implying increased market power in domestic industries;

Points:
1 point per disadvantage and explanation.

Part (b): 5 points
Expansionary monetary *and* fiscal policies are required. Expansionary monetary policy must include one of the following: OMO purchases, reduction in reserve requirement, or reduction in discount rate. Monetary policy leads to an increase in the money supply; a decrease in real interest rates; an increase in investment which is a component of Aggregate Demand; AD increases, resulting in increased output and prices. Fiscal policies are increasing government spending or decreasing taxes (corporate or personal income). An increase in G will directly increase AD resulting in an increase in output and prices. A decrease in taxes will increase C (or I if corporate taxes discussed) and directly increase AD. Output, employment, and prices will rise. Real interest rates will rise because the increase in government spending increases the demand for funds in the bond market (or loanable funds market). An alternative explanation is that nominal interest rates will rise because the expansionary fiscal policy increases income which, in turn, increases the demand for money. The effect on real interest rates is ambiguous because the magnitude of the price increase relative to the nominal interest rates' increase is unknown.

Points:
1 — Correct stabilization policies (a ½ point for each policy).
2 — Monetary policy explanation of linkages of real interest rate-investment-AD, output and price.

$$1 \quad \begin{cases} \uparrow M^s \rightarrow \downarrow i \\ \downarrow i \rightarrow \uparrow I \end{cases}$$

$$1 \quad \begin{cases} \uparrow I \rightarrow \uparrow AD \\ \uparrow AD \rightarrow \uparrow Q, \uparrow P \end{cases}$$

1 — Fiscal policy linkages of G/TX resulting in AD, output and price explanation.
1 — An explanation of the fiscal policy effect on real interest rates.

Part (c): 2 points

There are contradictory effects of interest rates as a result of the two stabilization policies — this should be noted by the student; however, consistency with answer to Part (b) is paramount. Decreasing interest rates will encourage investment which will stimulate capital stock growth or economic growth which in turn will shift the long-run aggregate supply curve or the production possibilities curve/frontier. [Positive net investment increases or investment in excess of replacement investment increases.] Increasing interest rates will have just the reverse effect — including a leftward shift in the long run aggregate supply curve or production possibilities curve.

Points:

1 — For the linkage of interest => investment => economic growth. Interest rate direction must be consistent with answer in Part (b).

1 — Shift in long run aggregate supply curve or the production possibilities curve.

Alternative Acceptable Answers:

- The monetarists would say that fiscal policy would not be as effective as Keynesians would and that it was probably fiscal policy which got us into the current situation. The monetarists would use the monetary policy tools to maintain a constant money supply growth to ensure a stable financial environment to permit the economy to self-adjust toward full employment GDP.
- Supply-siders would suggest that a decrease in taxes would provide incentives for increasing productivity and thus the AS curve would shift rightward. An accompanying AD shift is required for full credit.

To receive credit for an alternative answer, the student had to specify that the answer was using a particular theory. Other economic schools of thought were accepted and evaluated; however, no other school of thought generated a sufficient number of answers to provide a rubric. These answers were evaluated by the table leader.

Besides counting points, the answer may be looked at as a whole and ultimately judged by its overall quality. This is particularly true if the total point count includes a half. The final total should mean something in terms of the overall quality of the answer: 8 or 9 should reflect an excellent answer (a 9 is not necessarily a perfect answer); 6 and 7, a good answer; 4 and 5, an adequate answer; 3, a seriously deficient answer, but still an answer; 2, answers that are lots of words signifying nothing except one sustained argument; 1, a correct, relevant-to-the-question statement; 0, no relevant economic answer to the question. Using the holistic approach, the 1 or 2 is a "bottom up" approach.

Overall Comment on Student Responses to Question 1

Students continued to experience difficulty in addressing the impact of fiscal policy on interest rates and economic growth questions.

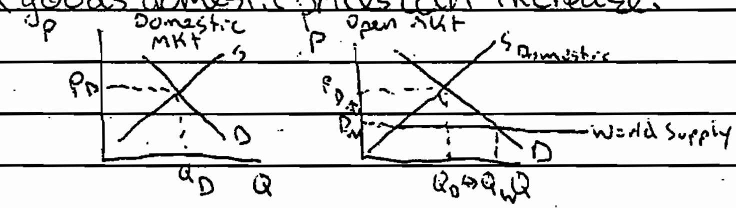
The primary mechanism by which fiscal policy affects interest rates is through the loanable funds market. If the government desires to increase government spending or decrease taxes, the resulting budget deficit must be funded through the sale of government securities. When the Treasury enters the loanable funds market, the demand for loanable funds increases and the interest rate rises. The reverse occurs with contractionary fiscal policy. Many students address the interest rate effect of fiscal policy through the money demand function. The standard line of reasoning is that increases in government spending increase aggregate demand which in turn increase equilibrium income. The increase in income will increase the demand for money thereby increasing interest rates. The above reasoning is correct; however, it is a *secondary* effect, which applies to expansionary monetary policy as well as to expansionary fiscal policy.

On the issue of economic growth, students confuse increases in GDP brought about by increases in aggregate demand with economic growth. Economic growth involves the change in *productive capacity*. We can represent economic growth by a change in potential GDP, changes in the long-run aggregate supply curve, or shifts in the production possibilities curve. Merely stating that an increase in investment leads to economic growth is not sufficient. The increase in investment must be beyond replacement investment; alternatively, the student could state the effect as an increase in net investment.

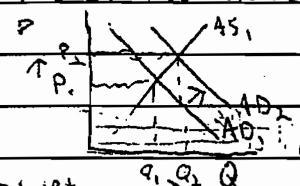
Sample Student Responses

Student Response 1 (Score of 9)

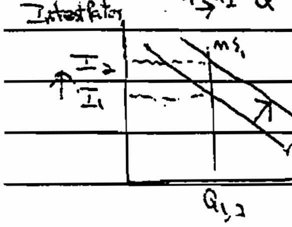
a) Using quotas and tariffs to restrict trade would only, at best, produce a short-run rise in employment. Temporarily the problem may be transferred to another country (beggar-thy-neighbor), but in the long run the standard of living in country X would actually decrease. By specializing and pursuing comparative advantages, a country is allowed to operate outside ~~the~~ its production possibilities curve. The input of foreign goods actually increases employment because large numbers of people would be employed by efficient exporting industries. Most likely, the output of these industries would decrease when other countries retaliated to the restrictions. This policy would also cause a rise in domestic price level. Without the competition of foreign goods domestic prices can increase.



b) Increasing government spending would be a powerful way to decrease unemployment. The government spending multiplier, $\frac{1}{1-\text{Marg. prop. to consum}}$ allows a small increase in spending to translate to a large increase in societal welfare.



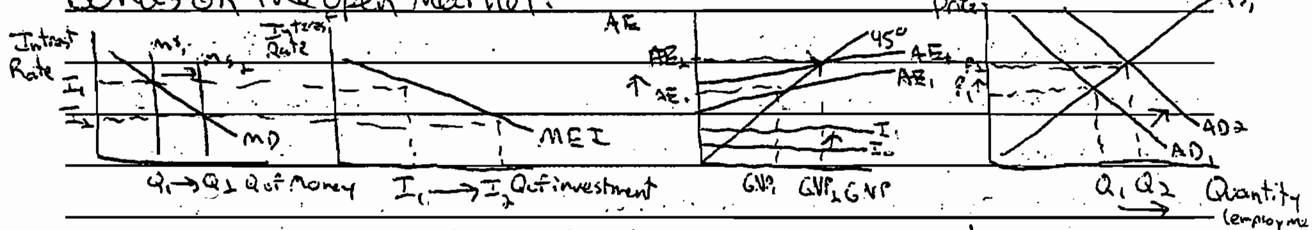
The increase in spending would cause an increase in Aggregate demand which causes an increase in both price levels and output.



As shown in the diagram, the nominal interest rates would increase because of an increase in money demand, but this increase would be somewhat offset by the increase in inflation (Nom. Interest Rate = Real Interest + Inflation (expected))

So in reality, real interest rates would probably not be affected greatly.

The most commonly used monetary policy option is Open Market Operations. To reduce unemployment, there needs to be an increase in the money supply. This would occur if the fed bought government bonds on the open market.



This fiscal policy forces lower interest rates which translate to an increase in investment. This increases aggregate expenditure which is aggregate demand, that is aggregate demand rises. This entails an increase in both output and price level. Nominal interest rates fall and inflation rises. This translates to a drop in the real interest rate because Real interest rate = Nominal - Expected inflation.

C) The low interest rates stimulate investment. This investment, if for instance was in technology, would increase a society's production possibilities frontier. In the long run this heightened investment would cause an increase in long run growth.

Comment: The essay receives full credit in Part (a) with the arguments of a decreased standard of living and the effects of retaliatory tariffs and quotas. The discussion of fiscal policy meets and exceeds the standards by supplying the information concerning the government spending multiplier. The interest rate effect of fiscal policy is via the money demand function, which in reality is a secondary effect, which also exists in expansionary monetary policy. The preferred interest rate effect is that of increased demand for loanable funds which occurs with the government financing the increased expenditures through the sale of Treasury securities. The expansionary monetary policy discussion is complete, although the student mistakenly refers to increases in the money supply via open market operations as fiscal policy. In Part (c), the student relates the low interest rates to stimulating investment which increases technology to shift the production possibilities curve outward, thus demonstrating an understanding of economic growth. This answer has two characteristics which are important to underscore: first, the student uses graphical analysis to enhance the answers and to ensure that the reader understands the verbal presentation; second, while the student did misstate fiscal policy instead of monetary policy, the student still received full credit. (A 9 is not necessarily a perfect answer.)

Student Response 2 (Score of 8)

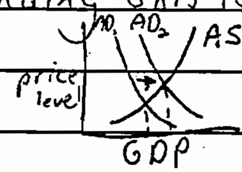
a) Policy I has 2 disadvantages:

1.) trade between countries is reduced because of quotas therefore comparative advantage in each country is not occuring (ie 1 country is forced to produce a product that the other country could produce more efficiently) therefore efficiency can decline in both countries.

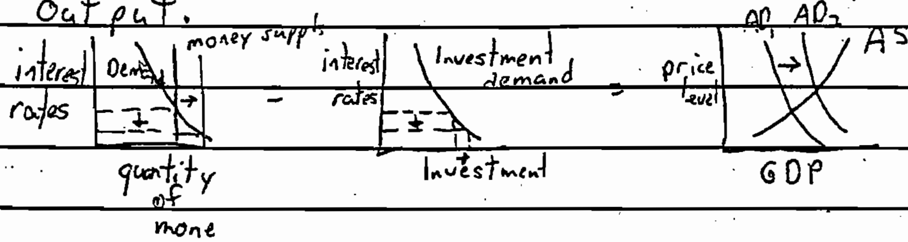
2.) Compitition is reduced domestically. Tariffs increase the price of foreign goods. Therefore domestic goods that may be produced less efficiently than foreign ones (therefore a higher price) will compete with artificially higher priced foreign goods.

b.) I would increase Gov't spending as a fiscal policy and buy gov't securities as a monetary policy.

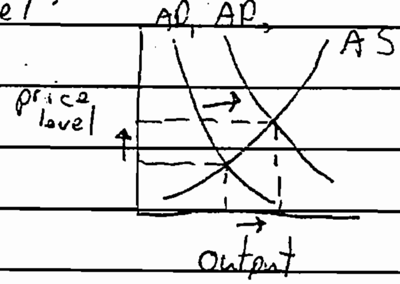
i) ↑ Gov't spending shifts aggregate demand to the right which ↑ output and employment



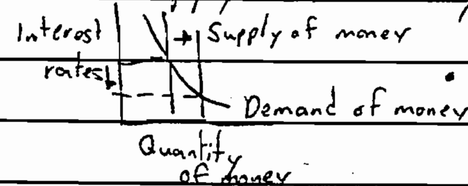
buying securities ↑ the money supply (A) which ↓ interest rates which ↑ Capital Investment which ↑ GDP and output.



ii) As seen in the previous answer these policies shift Aggregate demand to the right increasing output and price level:

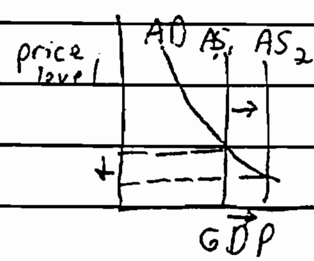


iii) As also seen in section (i), buying securities increases the supply of money ↓ interest rates.



fiscal policy has relatively little effect on the inerest rate although it also helps to ~~increase~~ decrease them.

c.) If decreased interest rates contine in the long run Capital investment spending will increase in the long run as seen in (b,i). Continued Capital spending can lead to increased technology and productivity which shift the long run Aggregate Supply curve to the right ↓ price levels and ↑ output

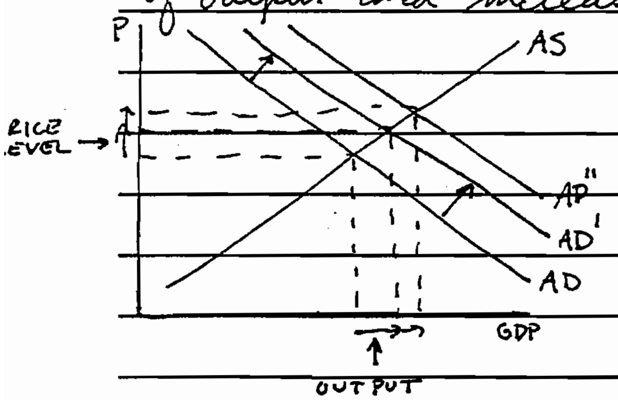


Comment: The candidate correctly identifies two arguments against the use of tariffs and quotas: efficiency is reduced and prices are artificially increased with the reduction in domestic competition. In Part (b), the student correctly describes the effects of expansionary fiscal and monetary policies. However, the interest rate effect of fiscal policy is incorrect. The correct argument is that the increased demand for funds by the government to finance the increase in government spending increases the demand for loanable funds and thus, increases the interest rate. In Part (c), the candidate clearly and concisely presents the argument that the decrease in interest rates (the only interest rate effect identified by this candidate) increases capital investment spending, which can lead to increased productivity and a rightward shift in the long-run aggregate supply curve, which decreases the price level and increases output.

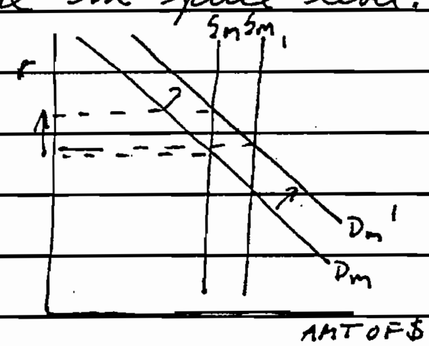
Student Response 3 (Score of 7)

a) ~~Policy I is disadvantageous because even though~~ Even though policy one will solve the problem in the short run, it will fail in the long run. If tariffs and quotas are raised in Country X, every other country around the world will levy tariffs as ~~a~~ a response measure. This would cause the net exports to return to their original level and nothing will have been accomplished. Also, by protecting its own industries, Country X is placing them in a less competetive market. Because of this the industries in Country X will further be unable to compete, because the incentive isn't there

b) To reduce unemployment, the government of Country X will engage in expansionary fiscal policy and the Federal Reserve in Country X will practice "loose money". Specifically, the government would increase spending. This additional spending would contribute to a rightward shift in aggregate demand and the associated expansion of output and increase in price level. Because of the



AGGREGATE SUPPLY AND DEMAND



THE MONEY MARKET

increased aggregate demand, the demand for money to pay for everything will go up. This will result in a raised interest rate. ~~If~~

If the Fed were to buy securities on the open market as part of its "loose money" policy, then aggregate demand will go to the right even more because private investment will go up as a result of the money market's dictation of a lower interest rate. With the shift ~~These two actions solve~~ in aggregate demand, price level and output go up even more, thus solving the problem of unemployment because in order to reach these new levels of output more people must be hired.

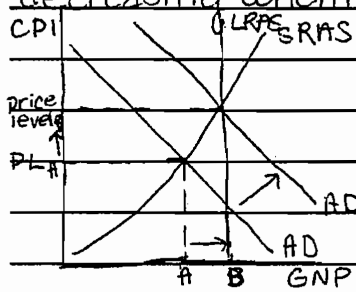
c) The interest rate effects in part (B) nullify each other for the most part. By expanding spending, the interest rate was pushed up, but expanding the supply of money by buying securities lessened that effect or may have even cancelled its effects. This is also evident in the MONEY MARKET graph to the left.

Comment: The student receives full credit in Part (a) for the retaliatory tariffs argument and for reduced incentive to compete in the domestic market after protection. In Part (b) the essay correctly prescribes an expansionary fiscal policy which increases aggregate demand resulting in increases in output and prices. For fiscal policy, the interest rate effect was explained using the increased demand for money. This is a secondary effect which comes from the increase in GDP. The preferred interest rate effect as the increase in demand for loanable funds (or increased supply of Treasury securities) was not discussed. The discussion of monetary policy is fully adequate although not presented in a logical sequence. The increase in money supply leads to a decrease in the interest rate which increases investment. The increase in investment increases aggregate demand which increases output and prices. The answer in Part (c) does not address the question of how the interest rate changes affect economic growth and, hence, receives no credit.

Student Response 4 (Score of 6)

a) One disadvantage of using policy 1 is that the products that now have tariffs (the imports) will be less and the ones that do come into the country will be more expensive. Consumers would be discouraged with this.

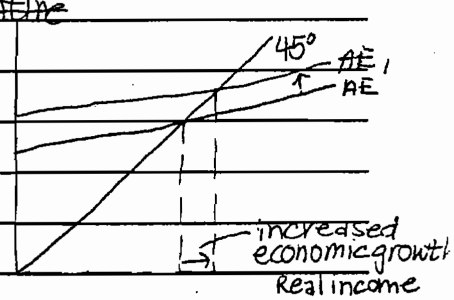
b) To reduce unemployment, the Federal Reserve, using monetary policy would create an easy money situation by purchasing government securities on the open market. This would increase the supply of money, lower interest rates, increase investment and increasing aggregate expenditures; thus, increasing aggregate demand and decreasing unemployment.



(i) Aggregate demand shifts out
(ii) Output increases from A (before shift) to B (after shift) and price level increases from A (before shift) to B (after shift).
(iii) real interest rates ~~increase~~ decrease when the supply of money increases.

A fiscal policy that the government will use to decrease unemployment will be to decrease personal taxes. This will increase disposable income. As shown above, this will increase aggregate demand, price level and output and decrease real interest rates.

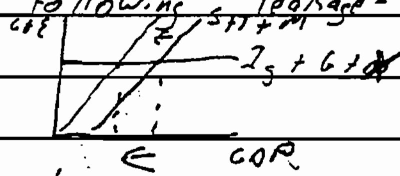
(c) If decreased interest rates would ~~contine~~ continue in the long run, there would be economic growth because there would be increases in investment; thus, increasing aggregate expenditures. The AE curve shifts out with investment expenditures.



Comment: The student receives partial credit in Part (a) for the argument that tariffs and quotas will lead to increased prices in the domestic economy. The discussion of expansionary monetary policy receives full credit in Part (b); however, the discussion of fiscal policy is very brief and there is merely an assertion concerning the interest rate effects of fiscal policy. Thus, only 4 points are earned in Part (b). A point is earned for linking the interest rate decline to an increase in investment to economic growth in Part (c).

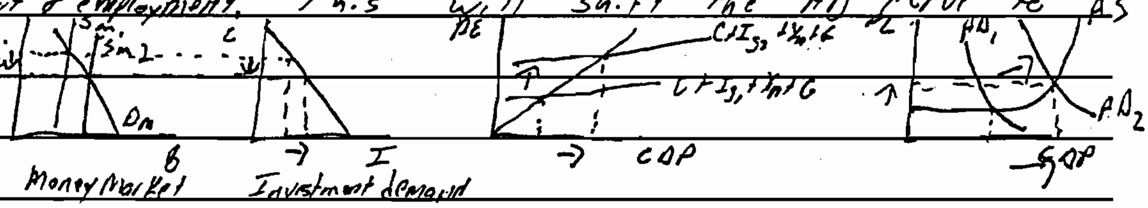
Student Response 5 (Score of 5)

If policy 1 is chosen many problems may occur. One of the most serious problems would be that lower imports will lower GDP. The following leakage-injection model demonstrates this problem.

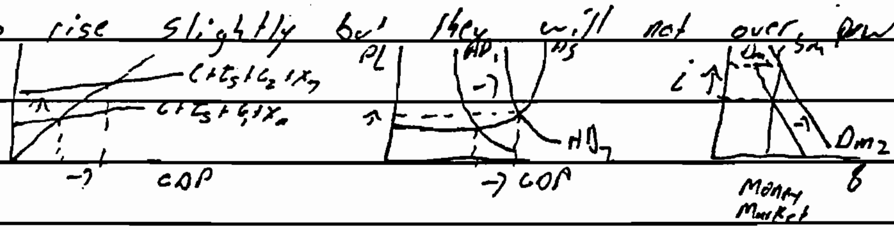


This drop in GDP will further the unemployment problem b/c sales will not be as high and people will lose their jobs.

The most effective monetary policy would be buying bonds in the open market. Buying bonds on the open market will inc. the supply of money. This inc. will cause a dec. in interest rates. This dec. will stimulate Investment which will raise output & employment. This will shift the AD curve to the right.



A fiscal policy that will support this action is inc. Gov't Spending. An inc. in gov't spending will cause GDP to rise which will shift the AD curve further to the right. This will cause an inc. in the price level which will create a higher demand for money. This inc. demand will cause interest rates to rise slightly but they will not overpower the initial drop.



If this policy is continued interest rates will continue to creep back up causing a lower rate of inc. for GDP. The prices will also continue up make the dollar more expensive to other nations which will lower exports and dec. GDP. This will be furthered by an inc. in imports.

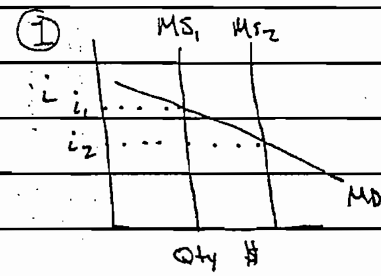
Comment: This essay correctly indicates that the decrease in net exports as a result of tariffs and quotas will actually increase the unemployment problem using the leakages-injection model. The candidate receives 1 point for Part (a) because a second disadvantage of tariffs and quotas is not presented. In Part (b), the essay correctly describes expansionary monetary policy and its effect on the economy; the interest rate-investment-aggregate demand linkage is well done. The fiscal policy description is adequate. However, the interest rate effect of fiscal policy is incorrect. Thus, the essay receives only 4 of the 5 points in Part (b). Part (c) is not addressed; the student discusses the international effects of the domestic policy which was not the question on the 1995 exam. Graphical analysis is used to enhance the answer.

Student Response 6 (Score of 4)

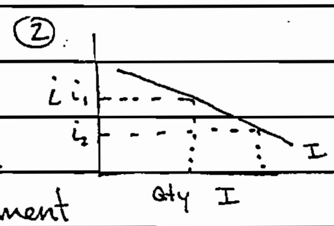
A. The only thing policy 1 does is increase prices of imports and restrict the amounts. the disadvantage is that this is a very limited solution - the effects do nothing to stimulate employment

B. Monetary Policy -

Step one is for FED's to buy securities/bonds this would cause an increase in the banks reserves allowing them more lending power, creating new money therefore increasing the Money Supply (please see graph 1)



as a result of the money supply increasing interest rates will fall (from pt i_1 to i_2 on graph 1). as interest rates fall the quantity of investment

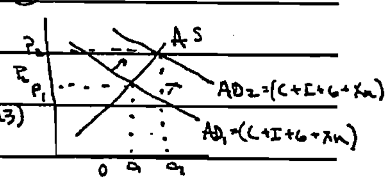


increases (see graph 2). (3)

since Investment is a component of Aggregate Demand

i and I increased - AD will increase as a direct result (see graph 3)

the Net results of AD increasing are there will be



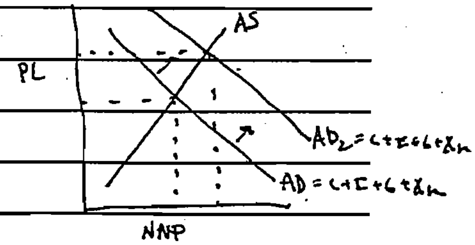
ii an increase in Price Levels and an increase in output and unemployment will therefore decrease.

The fiscal policy that could be taken instead of a monetary policy to reduce unemployment could be

an increase in Government spending in conjunction with a tax cut

the tax is related to disposable income.

a decrease in Tax results in more disposable income - allowing greater consumption.



an Increase in consumption + an increase in government spending would result in an increase of Aggregate Demand

(C & G components of AD)

i. Aggregate Demand has increased

ii. Output levels and Price levels have increased causing unemployment to decrease

Comment: The answer to Part (a) involves a series of assertions with no explanation as to why tariffs and quotas do not stimulate employment. Expansionary monetary policy is correctly discussed with its effects via the interest rate and investment. The graphical analysis amplifies the essay. The fiscal policy description is good. However, the interest rate effect of fiscal policy is not addressed. Part (c) is not attempted. Thus, the student receives no credit for Parts (a) and (c), and receives 4 of the 5 points in Part (b).

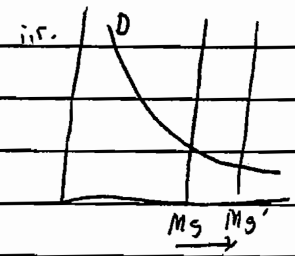
Student Response 7 (Score of 3)

a) Restricting imports may protect jobs in country X. However, if Country X does not have appropriate natural resources, does not have enough of these resources, or is technologically behind in production of these resources, then domestic production could decline for these products. The tariffs and quotas interfere with the positive aspects of comparitive advantage, and output decreases.

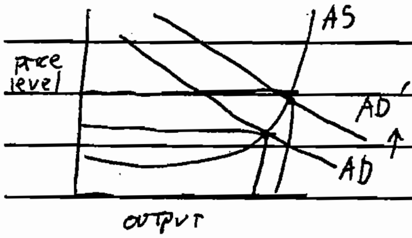
In addition, Country X's economy may suffer if exports decline as a result of trade barriers in other countries.

b) The best monetary policy action would be the government's buying of securities. In the money market,

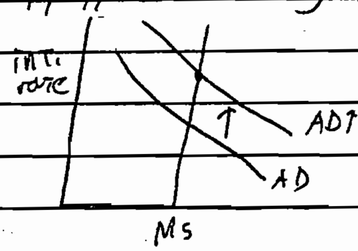
This increases gov't demand for dollars, ~~and increases the real interest rate~~: thereby increasing money supply and decreasing the interest rate.



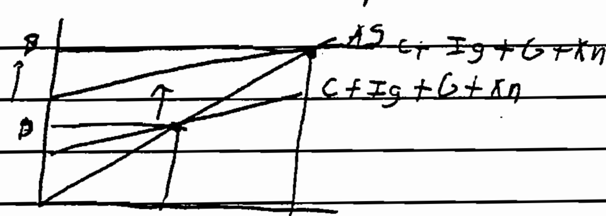
Increased money supply is in the form of increased excess reserves. Banks can therefore loan out more money and expand the economy. Output and price level will increase, if in the intermediate range of AS.



An example of fiscal policy would be increased government spending. This increased demand on a steady money supply, increasing interest rates.



Investment spending increases as a result of higher interest rates. Output increases, as does spending.



Price level increases as well.

c) Lower interest rates as a result of monetary policy will result in loss of foreign investment and the depreciation of the dollar. Economic growth will decline. ~~also as a result of lower~~

Higher interest rates as a result of ~~mone~~ fiscal policy will cause an increase in foreign investment and appreciation. However, net exports would eventually decline, slowing economic growth relatively.

Comment: The essay is inadequate. The student receives credit for the possibility of retaliatory trade barriers. In Part (b), the student identifies expansionary monetary and fiscal policies as the correct stabilization policy prescriptions which earns the student 1 point. An additional point is awarded for the effect on aggregate demand of expansionary monetary policy, although the student misses the interest rate-investment relationship. In Part (c), the student confuses foreign investment with capital investment and thus receives no credit.

Student Response 8 (Score of 2)

As the rate of unemployment all most doubles from 5 percent to 9 percent I have been given to options:

policy 1: Use tariffs and quotas to restrict imports and thus protect jobs in Country X

policy 2: use monetary and fiscal policies to solve the unemployment problem without resorting to trade restrictions.

To become isolated and ~~get~~ ~~[illegible]~~ ~~[illegible]~~ to increase tariffs and put quotas would be a disorder because we would put added pressure on companies and people to build and produce other products that we now limited

It would all so discourage trade with other countries. If we increase tariffs other countries would all so react in the same way. Thus giving us a overabundance of goods.

The way to solve this problem is thru a monetary policy or fisical policy action. First you have to stimulate the economy by increasing government spending and decreasing taxes, this is a fisical policy which would,

incourage companies to reinvest and expand. You would increase the amount of money out there by having the Federal Reserve drop the requirement which gives banks more money to lend out and more jobs can be created. A increase in the discount rate for a long time would be a foolish thing to do because then everyone would want to invest instead of expanding and making companies more ifecient.

Comment: At this end of the scale, students indicate a great lack of economic knowledge. This essay earns 1 point in Part (a) for mentioning the possibility of retaliatory trade policies and 1 point for correctly identifying an expansionary monetary policy and expansionary fiscal policy.

Student Response 9 (Score of 1)

a) Policy I: Use tariffs and quotas to restrict imports and thus protect jobs in Country X.

This solution makes perfect sense but does not look at the other possible outcomes of such tariffs and quotas. The jobs within country X may be protected, but they will also be limited to what is available within country X. Bringing in more imports could also bring in more jobs. Protection of jobs is not going to help anybody if there is such a limited number of jobs to be protected due to lack of imports. All imports must be handled in some way. Increased imports means increased manpower needed to handle the incoming imports. Tariffs and quotas will only restrict the potential employment growth with decreased imports.

Another disadvantage to using tariffs and quotas to limit imports is the possible negative reaction from the other countries wishing to export to country X. Other countries wishing to trade may not want to wait around for country X to develop a stable rate of unemployment. Businesses may be taken to other countries that are willing to trade at that same time.

b) A monetary policy that could possibly combat the unemployment problem, would be to lower the income tax rate. By doing this, the job becomes more valuable to the employee and to the unemployed individual seeking work. People would have a greater desire to work knowing that they will be able to retain a substantial amount of what is earned. (i) the demand of jobs would go up due to the increased interest in employment (ii) output and price levels will remain relatively constant due to the little change in supply/demand for the short term (iii) interest rates would slightly increase due to the increased amount of currency possessed by the individuals possibly looking for investment.

A fiscal policy would possibly be to lower government spending on things other than employment research. The government should put more money toward employment projects/agencies to help promote employment within the state communities. (i) With increased government spending going toward employment projects/agencies the demand for employment by both parties will increase (ii) output and price levels will remain relatively the same until employment rates dramatically increase (iii) interest rates will go up due to the spending of government money that must be compensated for.

c) If higher interest rates continue into the long run, the economy may remain the same until employment increases. But while the interest rates increase, the government will continue to have this income of money and therefore will be able to help the country as a whole.

Comment: This candidate's response is extremely inadequate. The response consists of nearly two pages of incorrect statements, as in the explanation of monetary and fiscal policy, or statements unrelated to the question, as in the first paragraph on tariffs and quotas. The candidate does address, in a limited way, the possibility of a "negative reaction"— trade war/retaliation and for this receives a point. This is an excellent example of an application of the holistic approach to scoring; the reader looks for a correct relevant statement.

Free-Response Question 2

Assume that the economy is in a recession.

(a) Explain each of the following.
  (i) Monetary and fiscal policies advocated by monetarists to eliminate the recession
  (ii) Monetary and fiscal policies advocated by Keynesians to eliminate the recession

(b) Explain how monetarists and Keynesians differ in their conclusions about the effects of crowding out associated with the stabilization policies outlined in Part (a).

Question 2 Scoring Guide

Basically the point distribution is 3 points for Part (a); 2 for Part (b).

Part (a): 3 points

Monetarists would advocate a money rule with no discretionary monetary or fiscal policy. They believe that fiscal policy is neutral due to crowding out. The monetary rule is growth of the money supply at the growth rate of real GDP, at 3-5% a year, or at an announced constant rate.

Keynesians believe that an expansionary fiscal policy should be used to eliminate a recession. Keynesians, in general, think that monetary policy is "unreliable" or less effective than fiscal policies. Low interest rates will not necessarily induce increased business investment or consumer spending.

Points:

1 — Student demonstrates an understanding of the monetary rule. Student must do more than state that the monetarists have a monetary rule, but does not have to explain it in detail.

½ — Monetarists believe fiscal policy is ineffective.

1 — Keynesians advocate an expansionary fiscal policy to eliminate a recession.

½ — Fiscal policy is more effective than monetary policy, or monetary policy is ineffective, or monetary policy is complementary to fiscal policy.

Part (b): 2 points

Monetarists believe that there is complete crowding out, thus making fiscal policy ineffective. Keynesians believe that there is little or no crowding out. Crowding out occurs when the government borrows money to increase government spending and thus reduces the amount of loanable funds available to the private sector.

Alternatively, the government enters the loanable funds market and is willing to pay whatever interest rate is necessary to "call forth" the funds required. The increase in interest rates reduces investment in the private sector.

Some students may discuss the differences between Keynesians and monetarists in terms of the interest sensitivity of investment — this is acceptable if correct.

Points:

1 — Statement that monetarists believe that there is crowding out and Keynesians believe there is little or no crowding out.

1 — Explanation of why monetarists and Keynesians take these positions. This explanation needs to demonstrate an understanding of crowding out.

Besides counting points, the answer may be looked at as a whole and ultimately judged by its overall quality. This is particularly true if the total score includes a half point. The final total should mean something in terms of the overall quality of the answer. 5 should reflect an excellent answer but not necessarily perfect; 4, an excellent answer with a flaw; 3, a good answer; 2, an adequate answer; 1, a seriously deficient answer, but still an answer; 0, all else.

Overall Comment on Student Responses to Question 2

The first short answer question asked the student to focus on the difference between the monetarist and Keynesian policy prescriptions for an economy in a recession. This question emphasized the need for knowing two important schools of economic thought and, in particular, the stabilization policies advocated by the different schools of thought. Many students responded by providing a discussion of expansionary stabilization policies, completely ignoring the viewpoints of Keynes and the monetarists. There was also evidence that students are unable to explain the crowding-out effect; although they may know the monetarist and Keynesian views of crowding out.

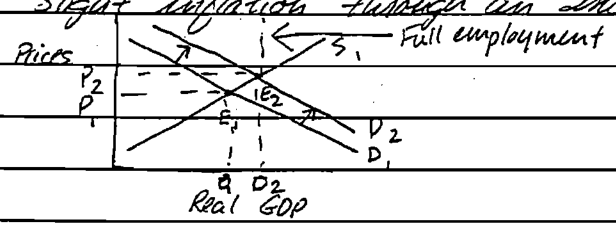
Sample Student Responses

Student Response 1 (Score of 5)

(a)

(i.) Monetarists would advocate very ~~[illegible]~~ limited monetary and fiscal policies during a recession. In this way they are quite similiar to Classical economists. They would ~~want to~~ have a monetary policy which simply increased the money supply 3-5% a year. No other monetary action would be taken. The monetarists would propose little in the way of fiscal policy as well. Since monetarists believe that fiscal policy has a negligable effect on the economy in the long run.

~~[illegible]~~(ii) Keynesians believed strongly in the use of fiscal policy, and to a lesser extent monetary policy. For monetary Policy, Keynesians would advocate either buying gov. securities, lowering the discount rate, or lowering the reserve requirement. The latter two policies have very powerful effects, however. Most often, Keynesian monetary policy relies on open-market operations. Keynesians would propose strong fiscal policy. They would combine a cut in taxes with an increase in government spending. This would increase employment and overall output, but probably also lead to slight inflation through an increase in demand.



(b) Monetarists believe that the crowding out effect virtually eliminates any effects of activist fiscal policy. The increase in gov. spending would simply drive interest rates up and force consumers out of the market. Keynesians do not feel that crowding-out is as serious of a dilemma. Though they acknowledge that crowding out does occur, they do not believe that ~~a~~ total crowding out will result. For Keynesians, an increase in gov. spending leads to an increase in consumer demand through ~~the~~ interest rates

Comment: This essay clearly indicates that monetarists would not use discretionary policy; monetarists would follow a monetary rule of a 3-5% per year increase in the money supply; and monetarists believe that fiscal policy is ineffective in the long run. The essay states the Keynesian position well with strong fiscal policy and the use of monetary policy as ancillary to the fiscal policy. In Part (b), the essay states the monetarist view of total crowding out and the Keynesian view that the crowding out would be incomplete. In addition, the student demonstrates an understanding of crowding out by describing the increase in government spending leading to a rise in interest rates which, in turn, drives consumers out of the market.

Student Response 2 (Score of 4)

2a) i) Monetarists would focus more on the monetary policies to counteract the recession and expect fiscal policies to reinforce what they do. Monetarists would recommend the purchase of govt. securities to increase the money supply. They would also recommend a drop in the prime rate and the reserve requirement as well to increase the money supply. Fiscal policy would be that of no policy, keeping Govt. expenditures the same as well as taxes. This monetary policy is intended to emphasize investment spending to increase AS and hire more people.

ii) Keynesians would on the other hand advocate fiscal policies to solve the ~~as~~ recession with monetary policies to reinforce that. Since Keynesians had no fear of inflation they would recommend a means of increasing AD. They would do this by increasing govt. expenditures and cutting taxes, effectively running a budget deficit. This would allow both G and consumption portions of AD to increase resulting in more output, and the hiring of more workers.

2b) Monetarists would claim that Keynesian tactics would crowd out investment. They state that since government is using up all the money, private firms will have to pay high interest rates to get the money needed for investment. Keynesians are highly suspicious of the true nature of the "crowding out effect" and claim it is negligible. Monetarists would claim that the "crowding out effect" will have the money ineffectively used by the govt. instead of effectively used by the private sector

Comment: This essay loses a point in Part (a) by not correctly stating the monetarist position. The essay indicates that monetarists would use discretionary monetary policy; this is incorrect. However, the student continues and indicates, correctly, that monetarists would advocate using no discretionary fiscal policy. The essay on the Keynesian policy prescriptive correctly identifies discretionary fiscal policy with monetary policy as a reinforcement. In Part (b), the monetarist position of discretionary fiscal policy crowding out private investment is clearly stated with the Keynesian perspective of a negligible impact of crowding out. Further, the essay indicates an understanding of crowding out.

Student Response 3 (Score of 3)

2. Economy in recession
a) Effects of monetary + fiscal policies of monetarists v. Keynesians
1. monetarist policies
a. decrease interest rates
1. increases investment
b. expand supply of money
1. more available money increases demand and GNP
c. lower reserve requirement
1. makes more money available ~~to~~ for banks to len
d. purchase bonds on open market
1. makes money more available
2. Keynesian policies
a. increase federal spending
1. more federal spending equates to more jobs and more money injected into economy
2. decrease in taxes
1. public has more money to spend in economy
b) Differing views between two groups regarding effects of crowding out

1. ~~Keynesians believe that investment~~
Monetarists believe increases in federal spending, resulting in higher interest rates, crowds out potential investors who would help the economy in the long run.

2. Keynesians believe that there is no substantial crowding out of investors

Comment: The student is denied 1 point in Part (a) for incorrectly discussing expansionary monetary policy rather than the monetary rule of increasing the money supply at the rate of 3-5% a year or an announced constant rate. The student was denied a 1/2 point for not stating the monetarist position that fiscal policy is ineffective. The student was granted 1 point for correctly asserting that the Keynesians would use fiscal policy, increasing federal spending, and decreasing taxes. The student was denied a 1/2 point for not stating that Keynesians believe that fiscal policy is more effective than monetary policy or that monetary policy is ineffective or monetary policy should be complementary to fiscal policy. In Part (b), the student was granted full credit for two reasons: firstly, for asserting that monetarists believe that increases in federal spending crowd out potential investors and Keynesians believe that there is no substantial crowding out of investors, and secondly, for demonstrating an understanding of crowding out by describing crowding out.

Student Response 4 (Score of 2)

2a. i. Monetarists believe that active fiscal policies seriously destabilize the economy, worsening the swing of the business cycle. There fore, they would advocate little to no fiscal action.

Depending on who you're talking to, monetarist want monetary policy either to be slightly expansio in a recession ~~selling~~ buying bonds and jawboning mostly, or to simply let the market system run its course, conforming to a simple and constant monetary growth rule, increasing the money supply by perhaps 4% a year.

ii. Keynesians would advocate an all out expansionary fiscal & monetary policy, increasing government spending, perhaps decreasing taxes, and attemp to expand the money supply. However, the monetar policy would be considered a distant second measure, because via the ~~[illegible]~~ multiplier, fiscal policy is ~~much~~ more effective.

b. Keynesians do not account for crowding out, either they don't believe in it, just as monetarists don't believe in liquidity traps, or they ignore it. Monetarists feel that as government spending increases, it "crowds out" private sector production, effectively nullifying a significant portion of the Keynesian's action, suggesting the greater importance of monetary policy.

Comment: The opening paragraph of the essay states correctly that monetarists would not advocate government intervention (fiscal policy) to solve a recession. However, the student continues with an explanation that monetarists would advocate an expansionary monetary policy to stimulate the stagnating economy. This is incorrect. Thus, the student earns a 1/2 point for the discussion of the monetarist position. The discussion of the Keynesian position of expansionary fiscal policy along with discretionary monetary policy earns full credit (1 1/2 points). The remaining portion of the essay incorrectly addresses crowding out and thus, receives no credit.

Student Response 5 (Score of 1)

(a) In a recession, policy makers seek to stimulate the economy by employing easy-money, or expansionary, methods. The monetarists advocate the use of monetary policies only to influence the economy and try to influence aggregate demand. By influencing demand, they believe, the aggregate supply is also changed. In a recession, monetarists would advocate using open market operations. The Federal Reserve would buy bonds to inject money into the market. Or, the reserve requirement of

commercial banks would be reduced, thus increasing the amount of excess reserves as in the equation ~~bl~~ below:

TR − ↓RR = ↑ER which leads to ↑ money supply

Banks would have more funds available to lend. Also, monetarists would encourage the lowering of the discount rate – the interest the Fed charges on commercial banks' loans. This, too, would increase the available amount of money.
(b) Fiscal and monetary policies, or a combination of both, would be used by the Keynesians to influence both AS + AD. Along with the methods above, they would use government spending increases. This injects money into the economy and encourages increased output and employment. Also, reducing taxes would have the effect of stimulation because consumers would have more money for expenditures. These stabilization policies are all expansionary measures to reduce the effects of a recession.
(b) Keynesians believe that

Comment: This essay indicates knowledge of expansionary discretionary stabilization policies but the writer does not know the monetarist position sufficiently to receive any credit. The student does receive credit for the explanation of Keynesian policy prescriptions, however crowding out was not addressed. The student earned a single point because the answer in its entirety does not respond to the question.

Free-Response Question 3

Explain how some individuals are helped and others harmed by unanticipated inflation as they participate in each of the following markets.

(a) Credit markets
(b) Labor markets
(c) Product markets

Question 3 Scoring Guide

Basically the point distribution is 2 points for Part (a), 2 for Part (b), and 1 for Part (c).

Part (a): 2 points total

With unanticipated inflation, borrowers are helped in that they repay in dollars which have less purchasing power than the dollars they borrowed. Likewise creditors are hurt because they receive payment in dollars which have less purchasing power. The student must assert who is helped <u>and</u> who is hurt.

Points:
1 —For assertion.
1 —For explanation.

Part (b): 2 points total

Employers benefit if output prices rise faster than labor costs. The unanticipated inflation hurts employees if their real wages have decreased. (Possible to receive a $^{1}/_{2}$ point.)

Points:
1 —Employer's impact with explanation.
1 —Employee's impact with explanation.

Part (c): 1 point total

If producers can raise prices faster than costs, they are helped. If producers have long-term contracts on prices, then they are hurt because costs could rise faster than prices. Consumers are hurt because real income is falling.

1 — Correct argument with explanation.

Besides counting points, the answer may be looked at as a whole and ultimately judged by its overall quality. This is particularly true if the total point count includes a half point. The final total should mean something in terms of the overall quality of the answer. 5 should reflect an excellent answer but not necessarily perfect; 4, an excellent answer with a flaw; 3, a good answer; 2, an adequate answer; 1, a seriously deficient answer, but still an answer; 0, all else.

Overall Comment on Student Responses to Question 3

The second short question on the AP Macroeconomics Exam focused on the effects of unanticipated inflation on credit, labor, and product markets. The students did not appear to know who the players were in each of the markets, and the language of "markets" appeared to confuse the students. The students did seem to have a firm understanding of the impact of unanticipated inflation on the credit market.

Sample Student Responses

Student Response 1 (Score of 5)

In a credit market, creditors are hurt by unexpected inflation, and debtors are helped. Inflation causes a decrease in the value of the

dollar, which means the debtors are paying their debts back in dollars worth less than those they borrowed.

In a labor market, laborers are hurt by inflation and employers are helped. The inflation causes the wages of the laborers to be worth less and have less buying power, while the employer is paying the same wages to the workers, in dollars that are suddenly worth less.

In a product market, buyers are hurt by inflation because they can suddenly buy less with their dollars. The producers can be hurt by this as well. While they are now getting a higher price for their products, they are selling fewer because consumers cannot afford as many.

Comment: This is an excellent essay written without using economic jargon. The student covers the credit and labor markets very well. The student earns the point for Part (c) for concluding that consumers (buyers) are hurt because their real income is falling. The second statement in Part (c) is not relevant to the question but no points are deducted. Only one correct argument is required for Part (c). Note: this answer indicates that a 5 is not a perfect answer; rather it is an excellent answer.

Student Response 2 (Score of 4)

(a) Credit- loaners are hurt because when debtors payback, they are actually paying back a value of money worth less than that they borrowed.

For example - If somebody borrows $100 from a bank and must pay it back in a year where there

is 7% inflation, he is only really paying back $93 (or 93%) this hurts the creditor and helps the borrower.

(b) Labor - The employer benefits and the employee is hurt because the real wage that the employee receives is worth less than its stated amount relative to the price level increase. Employer is actually paying lower value wages while the price level and supply increases.
(c) Product - The general price level in the product market increases due to inflation. Consumers actually increase and speed up the level of inflation by trying to avoid inflation by buying large quantities of the product. (Demand-Pull inflation)

Comment: In Part (a), the student correctly identifies that debtors are helped by unanticipated inflation in that they pay back loans in dollars with lower purchasing power and that creditors are hurt by this. The answer receives 2 points for Part (a). In Part (b), the impacts in the labor market are correctly identified. The answer receives 2 points in Part (b). In Part (c), the student earns no credit since the answer of demand-pull inflation is incorrect.

Student Response 3 (Score of 3)

(a) Creditors would lose because the purchasing power of the money they lent will be lower than when the lent it.
(b) Labor markets will be hurt because real wages will be lower and unless they have a COLA agreement they will not rise.

(c) Product markets will be harmed because goods are more expensive and people real income has fallen

Comment: The candidate correctly identifies that creditors will be hurt with unanticipated inflation because of the reduced purchasing power of the loan payments. However, the essay does not address the effect on the debtors; thus, the essay earns 1 point for Part (a). The labor market effect of lower real wages is correctly identified. Once again the impact on employers is not addressed in the answer and, thus, the essay earns 1 point in Part (b). The real income argument is presented and earns 1 point in Part (c).

Student Response 4 (Score of 2)

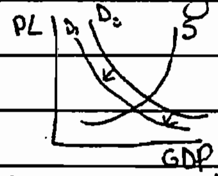
In the credit market only the borrowers are benefited from unanticipated inflation. This is because the value of the money they have borrowed is lessened and not as much on them to pay back. Consequently this hurts the lenders because they are in effect not recieving the total value of what they lent out.

The labor market is hurt by inflation because the prices of their products rise in accord with the rise in cost of making them that inflation induces. This lowers their aggregate demand because coupled with the inflation consumers can't afford their product and consumption drops.

Comment: The student correctly identifies the effects of unanticipated inflation in the credit market in Part (a), and thus receives the 2 points. In Part (b), the student does not correctly identify the effects, and Part (c) is not answered. This essay represents a very typical answer to the third macroeconomics question.

Student Response 5 (Score of 1)

Unanticipated inflation ~~may both~~ will help ~~and~~ or harm different groups. Credit markets will be hurt by unanticipated inflation because they ~~be~~ will receive in loan payments cheaper dollars than they loaned. Labor markets will be hurt by unanticipated inflation. As the price level rises, the demand for some goods and services will decrease. As the demand decreases, the quantity demanded will decrease, as with the quantity supplied. Businesses will not need as many workers to produce their products. Product markets will at first be helped by unanticipated inflation because they will be able to sell their goods and services at higher prices. Eventually, the product markets might be hurt because as the level of unemployment rises, the total GDP declines.



Comment: In this essay, the student correctly identifies that creditors will be harmed by unanticipated inflation and earns 1 point for this statement. The student says “credit markets,” but the context of the answer makes it clear that he or she meant “creditors.” However, the essay does not correctly identify the other ways in which unanticipated inflation affects the credit, labor, and product markets.

Chapter IV

Statistical Information

■ SECTION II SCORES

Table 4.1 shows the score distribution for the free-response section of the 1995 AP Macroeconomics Examination. Question 1 was scored on a 9-point scale, and Questions 2 and 3 used a 5-point scale. Question 1 had the highest mean as percent of maximum possible score, indicating that the score earned by this question's typical student was closer to the question's highest score than for the other two questions. On the other hand, Question 3 had the greatest standard deviation as percent of maximum possible score, indicating that the scores tended to be spread out more than for Questions 1 and 2.

Table 4.1 — Section II Scores

Score	Question 1		Question 2		Question 3	
	No. of Students (9*)	% Below Score	No. of Students (5*)	% Below Score	No. of Students (5*)	% Below Score
9	98	99.2				
8	475	95.4				
7	983	87.6				
6	1,442	76.1				
5	1,938	60.6	133	98.9	1,105	91.2
4	2,255	42.6	544	94.6	1,769	77.0
3	2,202	25.0	1,281	84.4	2,110	60.2
2	1,835	10.3	2,619	63.4	2,173	42.8
1	952	2.7	4,890	24.4	1,821	28.3
0	212	0.0	2,216	0.0	2,867	0.0
NR	130	0.0	839	0.0	677	0.0
Total No. of Candidates	12,522		12,522		12,522	
Standard Deviation as % of M.P.S.*	22%		23%		33%	
Mean	4.01		1.34		2.00	
Mean as % of M.P.S.*	45%		27%		40%	

* Maximum possible score

■ HOW THE AP GRADES IN MACROECONOMICS WERE DETERMINED

Possible raw scores for the AP Macroeconomics Examination ranged from 0 to 60 for Section I, and from 0 to 19 for Section II. However, scores are not reported to candidates, their schools, or colleges. They are converted to grades on a 5-point scale ranging from 1 to 5, and it is the grades that are reported.

AP grades for the 1995 Macroeconomics Examination were calculated on the basis of a formula that deducted a 1/4 point for each incorrect Section I answer and weighted the sections so that the multiple-choice section contributed twice as much to the maximum composite score as did the free-response section. The Scoring Worksheet (Table 4.2) details the process of converting AP scores to composite scores and then to grades for the 1995 AP Macroeconomics Examination.

The AP Macroeconomics Development Committee, in consultation with experts from ETS and the College Board, determines the formula that will be used to produce the composite scores that are the basis for AP grades. The chief faculty consultant sets the four cut points that divide the composite scores into groups, each corresponding to a different grade.

Table 4.2 — Scoring Worksheet

Section I: Multiple-Choice:

__________ − (0.25 × __________) = _______________

Number correct — Number wrong — Multiple-Choice Score (If less than zero, enter zero.)

Section II: Free-Response:

(1.0556 × __________) + (0.95 × __________)

Question 1 (out of 9) — Question 2 (out of 5)

+ (0.95 × __________) = __________

Question 3 (out of 5) — Free-Response Score

Composite Score:

1.0 × __________ = __________

Multiple-Choice Score — Weighted Section I Score (Do not round.)

1.5789 × __________ = __________

Free-Response Score — Weighted Section II Score (Do not round.)

__________ + __________ = __________

Weighted Section I Score — Weighted Section II Score — **Composite Score**

AP Grade:

Composite Score	AP Grade
65 – 90	5 (extremely well qualified)
50 – 64	4 (well qualified)
41 – 49	3 (qualified)
26 – 40	2 (possibly qualified)
0 – 25	1 (no recommendation)

A variety of information is available to help the chief faculty consultant determine the score ranges into which the exam grades should fall. Computer printouts provide complete distributions of scores on each portion of the multiple-choice and free-response sections of the examination, along with totals for each section and the composite score total.

With these tables and special statistical tables presenting grade distributions from previous years, the chief faculty consultant can compare the examination at hand to results of other years. Assessments are also made of the examination itself, and of the reliability of the scoring. Finally, for each composite score, a computer roster summarizes student performance on all sections of the exam. On the basis of professional judgment regarding the quality of performance represented by the achieved scores, the chief faculty consultant determines the candidates' final AP grades. The grade distributions for the 1995 AP Macroeconomics Examination are shown in Table 4.3, right.

Table 4.3 — Grade Distributions

Examination Grade	Number of Students	Percent at Grade
5	1,507	12.0
4	3,527	28.2
3	2,432	19.4
2	3,140	25.1
1	1,916	15.3
Total Number of Students		12,522
Mean Grade		2.97
Standard Deviation		1.27

It is interesting to note that almost 60 percent of the 1995 Macroeconomics candidates earned an AP grade of at least 3, qualifying them for credit or advanced placement at most colleges and universities that give credit for AP grades.

■ SECTION I SCORES AND AP GRADES

It is possible to predict final AP grades from Section I scores. Table 4.4 gives the numbers and probabilities of receiving a particular grade on the 1995 AP Macroeconomics Examination given a range of scores on Section I.

Table 4.4 — Section I Scores and AP Grades

Number of candidates within each multiple-choice score range who achieved a given grade

Probability that any candidate in a given multiple-choice score range would achieve a given grade on the 1995 AP Macroeconomics Examination

Multiple-Choice Score	AP Grade					Row Total
	1	2	3	4	5	
48-60	0 *0.0%*	0 *0.0%*	1 *0.1%*	262 *17.9%*	1,204 *82.1%*	1,467 *(11.7%)*
37-47	0 *0.0%*	3 *0.1%*	444 *12.3%*	2,847 *79.1%*	303 *8.4%*	3,597 *(28.7%)*
31-36	0 *0.0%*	340 *14.8%*	1,554 *67.4%*	411 *17.8%*	0 *0.0%*	2,305 *(18.4%)*
20-30	171 *5.4%*	2,557 *80.7%*	433 *13.7%*	7 *0.2%*	0 *0.0%*	3,168 *(25.3%)*
0-19	1,745 *87.9%*	240 *12.1%*	0 *0.0%*	0 *0.0%*	0 *0.0%*	1,985 *(15.9%)*
Column Total	1,916 *(15.3%)*	3,140 *(25.1%)*	2,432 *(19.4%)*	3,527 *(28.2%)*	1,507 *(12.0%)*	12,522 *(100.0%)*

■ RELIABILITY OF CLASSIFICATION

The classification reliability of AP grades can be examined by using a statistical technique that makes it possible to estimate the consistency and accuracy of decisions based on those grades. The *consistency* of the decisions is the extent to which they would agree with the decisions that would have been made if the candidates had taken a different form of the AP Macroeconomics Exam, equal in difficulty and covering the same content as the form they actually took. The *accuracy* of the decisions is the extent to which they would agree with the decisions that would be made if each candidate could somehow be tested with all possible forms of the exam.

Table 4.5 shows the decision consistency and accuracy of the 1995 AP Macroeconomics Examination. Each percentage in the table indicates the estimated proportion of candidates who would be consistently classified as either above or below the 2-3 or the 3-4 grade boundaries.

Table 4.5 — Estimated Consistency and Accuracy of Decisions Based on AP Grades for the 1995 AP Macroeconomics Examination

Estimated Percentage of Candidates Who Would Be Reclassified the Same Way on the Basis of:			
Another Form		Average of All Forms	
2-3 boundary	3-4 boundary	2-3 boundary	3-4 boundary
87%	86%	91%	90%

The percentages in the table are estimates — candidates rarely take more than one form of the exam — and are based on data from a representative sample of the standard group of candidates who took the 1995 AP Macroeconomics Exam.

■ COLLEGE COMPARABILITY STUDIES

The Advanced Placement Program has conducted college grade comparability studies in various AP Examination subjects. These studies have compared the performance of AP Exam candidates with that of college students in related courses who have taken the AP Exam at the end of their course. In general, these studies indicate that AP grades of 5 and 4 are comparable to a college course grade of A, while at some institutions, an AP grade of 4 is comparable to a college course grade of B. An AP grade of 3 is approximately equal to a college course grade of B at many institutions, while at others, it is more nearly comparable to a college course grade of C.

Other studies conducted by colleges and universities indicate that AP students generally receive higher grades in advanced courses than do the students who have taken the regular freshman-level courses at the institution. Each college is encouraged to undertake such studies in order to establish appropriate policy for the acceptance of AP grades. Data for these studies are readily available as large percentages of AP students successfully handle the associated course work. Some institutions have found that until these studies are undertaken, placing students into advanced classes but allowing them to transfer to a lower-level course if necessary, is a desirable educational strategy.

■ REMINDERS FOR ALL GRADE REPORT RECIPIENTS

AP Examinations are designed to provide accurate assessments of achievement. However, any examination has limitations, especially when used for purposes other than those intended. Presented here are some suggestions for teachers to aid in the use and interpretation of AP grades.

■ AP Examinations are developed and evaluated independently of each other. They are linked only by common purpose, format, and method of reporting results. Therefore, comparisons should not be made between grades on different AP Examinations. An AP grade in one subject may not have the same meaning

as the same AP grade in another subject, just as national and college standards vary from one discipline to another.

■ AP grades are not exactly comparable to college course grades. The AP Program conducts research studies every few years in each AP subject to ensure that the AP grading standards are comparable to those used in colleges with similar courses.

■ The confidentiality of candidate grade reports should be recognized and maintained. All individuals who have access to AP grades should be aware of the confidential nature of the grades and agree to maintain their security. In addition, school districts and states should not release data about high school performance without the school's permission.

■ AP Examinations are not designed as instruments for teacher or school evaluation. A large number of factors influence AP Exam performance in a particular course or school in any given year. As a result, differences in AP Exam performance should be carefully studied before being attributed to the teacher or school.

■ Where evaluation of AP students, teachers, or courses is desired, local evaluation models should be developed. An important aspect of any evaluation model is the use of an appropriate method of comparison or frame of reference to account for yearly changes in student composition and ability, as well as local differences in resources, educational methods, and socioeconomic factors.

■ The "Report to AP Teachers" can be a useful diagnostic tool in reviewing course results. This report identifies areas of strength and weakness for each AP course. This information may also help to guide your students in identifying their own strengths and weaknesses in preparation for future study.

■ Many factors can influence course results. AP Exam performance may be due to the degree of agreement between your course and the course defined in the relevant AP Course Description, use of different instructional methods, differences in emphasis or preparation on particular parts of the examination, differences in pre-AP curriculum, or differences in student background and preparation in comparison with the national group.

■ REPORTS ON AP GRADES

The results of AP Examinations are disseminated in several ways to candidates, their secondary schools, and the colleges they select.

■ College and candidate grade reports contain a cumulative record of all grades earned by the candidate on AP Exams during the current or previous years. These reports are sent in early July. (School grade reports are sent shortly thereafter.)

■ Group results for AP Examinations are available to AP teachers whenever five or more candidates at a school have taken a particular AP Examination.

■ The "Report to AP Teachers" provides useful information comparing local candidate performance with that of the total group of candidates taking an exam, as well as details on different subsections of the examination.

Several other reports produced by the AP Program provide summary information on AP Examinations.

■ State and National Reports show the distribution of grades obtained on each AP Exam for all candidates and for subsets of candidates broken down by sex and by ethnic group.

■ The Program also produces a one-page summary of AP grade distributions for all exams in a given year.

For information on any of the above, please call AP Services at (609) 771-7300 or contact them via e-mail at apexams@ets.org.

■ PURPOSE OF AP GRADES

AP grades are intended to allow participating colleges and universities to award college credit, advanced placement, or both to qualified students. In general, an AP grade of 3 or higher indicates sufficient mastery of course content to allow placement in the succeeding college course, or credit for and exemption from a college course comparable to the AP course. Credit and placement policies are determined by each college or university, however, and students should be urged to contact their colleges directly to ask for specific Advanced Placement policies in writing.

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	235524	*Teacher's Guide to the AP Course in Macroeconomics*	$12	
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	254349	The above examination only (packets of 10)	$30	
	468235	*The 1990 AP Examinations in Economics and Their Grading*	$13	
	254312	The above examinations only (packets of 10)	$30	
			In Canada, add GST (GST registration number: 13141 4468 RT).	
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