
Macroeconomics

Practice Exam

This exam may not be posted on school or personal websites, nor electronically redistributed for any reason. This Released Exam is provided by the College Board for AP Exam preparation. Teachers are permitted to download the materials and make copies to use with their students in a classroom setting only. To maintain the security of this exam, teachers should collect all materials after their administration and keep them in a secure location.

Further distribution of these materials outside of the secure College Board site disadvantages teachers who rely on uncirculated questions for classroom testing. Any additional distribution is in violation of the College Board's copyright policies and may result in the termination of Practice Exam access for your school as well as the removal of access to other online services such as the AP Teacher Community and Online Score Reports.

Contents

Exam Instructions

Student Answer Sheet for the Multiple-Choice Section

Section I: Multiple-Choice Questions

Section II: Free-Response Questions

Multiple-Choice Answer Key

Free-Response Scoring Guidelines

Scoring Worksheet

Question Descriptors and Performance Data

Note: This publication shows the page numbers that appeared in the **2016–17 AP Exam Instructions** book and in the actual exam. This publication was not repaginated to begin with page 1.

Exam Instructions

The following contains instructions taken from the *2016–17 AP Exam Instructions* book.

AP[®] Macroeconomics Exam

Regularly Scheduled Exam Date: Wednesday afternoon, May 10, 2017

Late-Testing Exam Date: Wednesday morning, May 17, 2017

AP[®] Microeconomics Exam

Regularly Scheduled Exam Date: Friday morning, May 12, 2017

Late-Testing Exam Date: Wednesday afternoon, May 17, 2017

Section I **Total Time:** 1 hour 10 minutes
Calculator not permitted
Number of Questions: 60*
Percent of Total Score: 66.67%
Writing Instrument: Pencil required
**The number of questions may vary slightly depending on the form of the exam.*

Section II **Total Time:** 1 hour
Calculator not permitted
Number of Questions: 3 required free-response questions
(10-minute reading period, 50-minute writing period)
Percent of Total Score: 33.33%
Writing Instrument: Pen with black or dark blue ink

What Proctors Need to Bring to This Exam

- Exam packets
- Answer sheets
- AP Student Packs
- 2016-17 AP Coordinator's Manual
- This book — *AP Exam Instructions*
- AP Exam Seating Chart template
- School Code and Home-School/Self-Study Codes
- Pencil sharpener
- Container for students' electronic devices (if needed)
- Extra No. 2 pencils with erasers
- Extra pens with black or dark blue ink
- Lined paper
- Stapler
- Watch
- Signs for the door to the testing room
 - “Exam in Progress”
 - “Cell phones are prohibited in the testing room”

Macroeconomics

Before Distributing Exams: Check that the title on exam covers is **Macroeconomics**, and is printed in **blue** on the Section I exam booklet covers. (On any large-type or photo-enlarged exams, the exam title will be printed in black.) If there are any exam booklets with a different title, contact the AP coordinator immediately.

Microeconomics

Before Distributing Exams: Check that the title on all exam covers is **Microeconomics**, and is printed in **black**. If there are any exam booklets with a different title, contact the AP coordinator immediately.

SECTION I: Multiple Choice

- Do not begin the exam instructions below until you have completed the
● appropriate General Instructions for your group.

Make sure you begin the exam at the designated time. Remember, you must complete a seating chart for this exam. See pages 325–326 for a seating chart template and instructions. See the *2016-17 AP Coordinator's Manual* for exam seating requirements (pages 51–54).

Macroeconomics

If you are giving the regularly scheduled exam, say:

It is Wednesday afternoon, May 10, and you will be taking the AP Macroeconomics Exam.

If you are giving the alternate exam for late testing, say:

It is Wednesday morning, May 17, and you will be taking the AP Macroeconomics Exam.

Microeconomics

If you are giving the regularly scheduled exam, say:

It is Friday morning, May 12, and you will be taking the AP Microeconomics Exam.

If you are giving the alternate exam for late testing, say:

It is Wednesday afternoon, May 17, and you will be taking the AP Microeconomics Exam.

In a moment, you will open the packet that contains your exam materials. By opening this packet, you agree to all of the AP Program's policies and procedures outlined in the *2016-17 Bulletin for AP Students and Parents*.

Macroeconomics

If you are giving a regular format AP Macroeconomics Exam, say:

Look at your exam packet and confirm that the exam title is “AP Macroeconomics” and is printed in blue on the Section I booklet cover. Raise your hand if your exam packet contains any title other than “AP Macroeconomics” and I will help you.

If you are giving a large-type or photo-enlarged AP Macroeconomics Exam, say:

Look at your exam packet and confirm that the exam title is “AP Macroeconomics” and is printed in black. Raise your hand if your exam packet contains any title other than “AP Macroeconomics” and I will help you.

Microeconomics

Say:

Look at your exam packet and confirm that the exam title is “AP Microeconomics” and is printed in black. Raise your hand if your exam packet contains any title other than “AP Microeconomics” and I will help you.

Once you confirm that all students have the correct exam, say:

You may now remove the shrinkwrap from your exam packet and take out the Section I booklet, but do not open the booklet or the shrinkwrapped Section II materials. Put the white seals aside. . . .

Carefully remove the AP Exam label found near the top left of your exam booklet cover. Now place it on page 1 of your answer sheet on the light blue box near the top right corner that reads “AP Exam Label.”

If students accidentally place the exam label in the space for the number label or vice versa, advise them to leave the labels in place. They should not try to remove the label; their exam can still be processed correctly.

Read the statements on the front cover of Section I and look up when you have finished. . . .

Sign your name and write today’s date. Look up when you have finished. . . .

Now print your full legal name where indicated. Are there any questions? . . .

Turn to the back cover of your exam booklet and read it completely. Look up when you have finished. . . .

Are there any questions? . . .

You will now take the multiple-choice portion of the exam. You should have in front of you the multiple-choice booklet and your answer sheet. You may never discuss the multiple-choice exam content at any time in any form with anyone, including your teacher and other students. If you disclose the multiple-choice exam content through any means, your AP Exam score will be canceled.

Open your answer sheet to page 2. You must complete the answer sheet using a No. 2 pencil only. Mark all of your responses beginning on page 2 of your answer sheet, one response per question. Completely fill in the circles. If you need to erase, do so carefully and completely. No credit will be given for anything written in the exam booklet. Scratch paper is not allowed, but you may use the margins or any blank space in the exam booklet for scratch work. Calculators are not allowed on any part of this exam. Are there any questions? . . .

You have 1 hour and 10 minutes for this section. Open your Section I booklet and begin.



Note Start Time here _____. Note Stop Time here _____. Check that students are marking their answers in pencil on their answer sheets and that they are not looking at their shrinkwrapped Section II booklets. After 1 hour, say:

There are 10 minutes remaining.

After 10 minutes, say:

Stop working. Close your booklet and put your answer sheet on your desk, face up. Make sure you have your AP number label and an AP Exam label on page 1 of your answer sheet. Sit quietly while I collect your answer sheets.

Collect an answer sheet from each student. Check that each answer sheet has an AP number label and an AP Exam label. After all answer sheets have been collected, say:

Now you must seal your exam booklet using the white seals you set aside earlier. Remove the white seals from the backing and press one on each area of your exam booklet cover marked "PLACE SEAL HERE." Fold each seal over the back cover. When you have finished, place the booklet on your desk, face up. I will now collect your Section I booklet. . . .

Collect a Section I booklet from each student. Check that each student has signed the front cover of the sealed Section I booklet.

There is a 10-minute break between Sections I and II. When all Section I materials have been collected and accounted for and you are ready for the break, say:

Please listen carefully to these instructions before we take a 10-minute break. All items you placed under your chair at the beginning of this exam must stay there, and you are not permitted to open or access them in any way. Leave your shrinkwrapped Section II packet on your desk during the break. You are not allowed to consult teachers, other students, notes, or textbooks during the break. You may not make phone calls, send text messages, check email, use a social networking site, or access any electronic or communication device. Remember, you may never discuss the multiple-choice exam content at any time in any form with anyone, including your teacher and other students. If you disclose the multiple-choice exam content through any means, your AP Exam score will be canceled. Are there any questions? . . .



You may begin your break. Testing will resume at _____.

SECTION II: Free Response

After the break, say:

May I have everyone's attention? Place your Student Pack on your desk. . . .

You may now remove the shrinkwrap from the Section II packet, but do not open the exam booklet until you are told to do so. . . .

Read the bulleted statements on the front cover of the exam booklet. Look up when you have finished. . . .

Now take an AP number label from your Student Pack and place it on the shaded box. If you don't have any AP number labels, write your AP number in the box. Look up when you have finished. . . .

Read the last statement. . . .

Using a pen with black or dark blue ink, print the first, middle, and last initials of your legal name in the boxes and print today's date where indicated. This constitutes your signature and your agreement to the statements on the front cover. . . .

Turn to the back cover and, using your pen, complete Item 1 under "Important Identification Information." Print the first two letters of your last name and the first letter of your first name in the boxes. Look up when you have finished. . . .

In Item 2, print your date of birth in the boxes. . . .

In Item 3, write the school code you printed on the front of your Student Pack in the boxes. . . .

Read Item 4. . . .

Are there any questions? . . .

I need to collect the Student Pack from anyone who will be taking another AP Exam. You may keep it only if you are not taking any other AP Exams this year. If you have no other AP Exams to take, place your Student Pack under your chair now. . . .

Read the information on the back cover of the exam booklet. Do not open the booklet until you are told to do so. Look up when you have finished. . . .

Collect the Student Packs. Then say:

Are there any questions? . . .

The total Section II time is 1 hour. This includes a 10-minute reading period. The reading period is designed to provide you with time to develop thoughtful, well-organized responses. You are advised to take advantage of the reading period to plan what you will write. You may begin writing your exam responses before the reading period is over. You may make notes on page 3 and the pages that contain the exam questions, but your responses must be written on the designated lined pages. Are there any questions? . . .

You are responsible for pacing yourself and may proceed freely from one question to the next. You must write your answers in the Section II booklet using a pen with black or dark blue ink. You are not permitted to use other colored pens or pencils to draw graphs or diagrams. If you need more paper to complete your responses, raise your hand. At the top of each extra sheet of paper you use, be sure to write only:

- your AP number, and
- the question number you are working on.

Make sure to begin your response on the lined page directly following the first appearance of the question and continue your response on the additional lined pages that follow. Remember to write your answers on the lined pages provided for each question; only responses written on the lined pages will be scored.

You may now open the Section II booklet and begin the 10-minute reading period.



Note Start Time here _____. Note Stop Time here _____. After 10 minutes, say:

The reading period is over. You have 50 minutes remaining to complete Section II.



Note Start Time here _____. Note Stop Time here _____. Check that students are using pens and that they are writing their answers in their exam booklets. After 40 minutes, say:

There are 10 minutes remaining.

After 10 minutes, say:

Stop working and close your exam booklet. Place it on your desk, face up. . . .

If any students used extra paper for a question in the free-response section, have those students staple the extra sheet(s) to the first page corresponding to that question in their exam booklets. Complete an Incident Report. A single Incident Report may be completed for multiple students per exam subject per administration (regular or late testing) as long as all of the required information is provided. Include all exam booklets with extra sheets of paper in an Incident Report return envelope (see page 62 of the *2016-17 AP Coordinator's Manual* for complete details). Then say:

Remain in your seat, without talking, while the exam materials are collected. . . .

Collect a Section II booklet from each student. Check for the following:

- Exam booklet front cover: The student placed an AP number label on the shaded box and printed his or her initials and today's date.
- Exam booklet back cover: The student completed the "Important Identification Information" area.

When all exam materials have been collected and accounted for, return to students any electronic devices you may have collected before the start of the exam.

If you are giving the regularly scheduled exam, say:

You may not discuss or share the free-response exam content with anyone unless it is released on the College Board website in about two days. Your AP Exam score results will be available online in July.

If you are giving the alternate exam for late testing, say:

None of the content in this exam may ever be discussed or shared in any way at any time. Your AP Exam score results will be available online in July.

If any students completed the AP number card at the beginning of this exam, say:

Please remember to take your AP number card with you. You will need the information on this card to view your scores and order AP score reporting services online.

Then say:

You are now dismissed.

Post-Exam Tasks

Be sure to give the completed seating chart to the AP coordinator. Schools must retain seating charts for at least six months (unless the state or district requires that they be retained for a longer period of time). Schools should not return any seating charts in their exam shipments unless they are required as part of an Incident Report.

The exam proctor should complete the following tasks if asked to do so by the AP coordinator. Otherwise, the AP coordinator must complete these tasks.

All exam materials must be placed in secure storage until they are returned to the AP Program after your school's last administration. Before storing materials, check the "School Use Only" section on page 1 of the answer sheet and:

- Fill in the appropriate section number circle in order to access a separate AP Instructional Planning Report (for regularly scheduled exams only) or subject score roster at the class section or teacher level. See "Post-Exam Activities" in the *2016-17 AP Coordinator's Manual*.
- Check your list of students who are eligible for fee reductions and fill in the appropriate circle on their registration answer sheets.

Student Answer Sheet for the Multiple-Choice Section

Use this section to capture student responses. (Note that the following answer sheet is a sample, and may differ from one used in an actual exam.)

COMPLETE THIS AREA AT EVERY EXAM.

USE NO. 2 PENCIL ONLY

To maintain the security of the exam and the validity of my AP score, I will allow no one else to see the multiple-choice exam content. I will seal the multiple-choice booklet when asked to do so, and I will not discuss the exam content with anyone at any time after completing the section. I am aware of and agree to the AP Program's policies and procedures as outlined in the *2016-17 Bulletin for AP Students and Parents*, including using testing accommodations (e.g., extended time, computer, etc.) only if I have been preapproved by College Board Services for Students with Disabilities.

A. SIGNATURE	Sign your legal name as it will appear on your college applications.	Date
---------------------	--	------

B. LEGAL NAME			Omit apostrophes, Jr., II.
Legal Last Name — First 15 Letters		Legal First Name — First 12 Letters	MI

[illegible]

H. AP EXAM I AM TAKING USING THIS ANSWER SHEET	Exam Name:	Form:	Form Code:

SCHOOL USE ONLY									
Section Number					Fee Reduction Granted				
1	2	3	4	5	6	7	8	9	1 Option 1 2 Option 2

C. YOUR AP NUMBER							
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9

D. EXAM DATE			
Month		Day	
0	0	0	0
1	1	1	1
	2	2	2
	3	3	3
	4		4
	5		5
	6		6
	7		7
	8		8
	9		9

E. EXAM START TIME	
AM	PM
6	12
7	1
8	2
9	3
10	4
11	5

[illegible]

G. ONLINE PROVIDER CODE		
0	0	0
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

I. AREA CODE AND PHONE NUMBER									
0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9
INTERNATIONAL PHONE									

[illegible]

COMPLETE THIS AREA ONLY ONCE.

J. SCHOOL YOU ATTEND						
SCHOOL CODE						School Name
0	0	0	0	0	0	
1	1	1	1	1	1	
2	2	2	2	2	2	
3	3	3	3	3	3	
4	4	4	4	4	4	City
5	5	5	5	5	5	State
6	6	6	6	6	6	
7	7	7	7	7	7	Country
8	8	8	8	8	8	
9	9	9	9	9	9	

M. COLLEGE TO RECEIVE YOUR AP SCORE REPORT				
COLLEGE CODE				Using the college code listed in the AP Student Pack, indicate the ONE college that you want to receive your AP score report.
0	0	0	0	
1	1	1	1	
2	2	2	2	
3	3	3	3	
4	4	4	4	City
5	5	5	5	
6	6	6	6	
7	7	7	7	State
8	8	8	8	
9	9	9	9	Country

K. DATE OF BIRTH				
Month	Day		Year	
<input type="radio"/> Jan				
<input type="radio"/> Feb	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
<input type="radio"/> Mar	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="1"/>
<input type="radio"/> Apr	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>
<input type="radio"/> May	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>	<input type="text" value="3"/>
<input type="radio"/> Jun	<input type="text" value="4"/>	<input type="text" value="4"/>	<input type="text" value="4"/>	<input type="text" value="4"/>
<input type="radio"/> Jul	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>	<input type="text" value="5"/>
<input type="radio"/> Aug	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>	<input type="text" value="6"/>
<input type="radio"/> Sep	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>	<input type="text" value="7"/>
<input type="radio"/> Oct	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>	<input type="text" value="8"/>
<input type="radio"/> Nov	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>	<input type="text" value="9"/>
<input type="radio"/> Dec				

N. CURRENT GRADE LEVEL	
<input type="radio"/> Not yet in 9th grade	<input type="radio"/> 11th
<input type="radio"/> 9th	<input type="radio"/> 12th
<input type="radio"/> 10th	<input type="radio"/> No longer in high school

O. STUDENT SEARCH SERVICE®	
Colleges and scholarship programs may request your information to inform you of educational opportunities and financial aid.	
Would you like us to supply your information?	
<input type="radio"/> Yes	<input type="radio"/> No
If you don't answer and previously chose to participate in this service, we will continue providing your information.	

COMPLETE THIS AREA AT EACH EXAM (IF APPLICABLE).

P. SURVEY QUESTIONS — Answer the survey questions in the AP Student Pack. Do not put responses to exam questions in this section.

1 (A) (B) (C) (D) (E) (F) (G) (H) (I)
2 (A) (B) (C) (D) (E) (F) (G) (H) (I)
3 (A) (B) (C) (D) (E) (F) (G) (H) (I)

4 (A) (B) (C) (D) (E) (F) (G) (H) (I)

5 (A) (B) (C) (D) (E) (F) (G) (H) (I)

6 (A) (B) (C) (D) (E) (F) (G) (H) (I)

7 (A) (B) (C) (D) (E) (F) (G) (H) (I)

8 (A) (B) (C) (D) (E) (F) (G) (H) (I)

9 (A) (B) (C) (D) (E) (F) (G) (H) (I)

Q. LANGUAGE — Do not complete this section unless instructed to do so.

If this answer sheet is for the French Language and Culture, German Language and Culture, Italian Language and Culture, Spanish Language and Culture, or Spanish Literature and Culture Exam, please answer the following questions. Your responses will not affect your score.

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

QUESTIONS 1–75

Indicate your answers to the exam questions in this section (pages 2 and 3). Mark only one response per question for Questions 1 through 120. If a question has only four answer options, do not mark option E. Answers written in the multiple-choice booklet will not be scored.

COMPLETE MARK



EXAMPLES OF INCOMPLETE MARKS



You must use a No. 2 pencil and marks must be complete. Do not use a mechanical pencil. It is very important that you fill in the entire circle darkly and completely. If you change your response, erase as completely as possible. Incomplete marks or erasures may affect your score.

1	(A	B	C	D	E)
2	(A	B	C	D	E)
3	(A	B	C	D	E)
4	(A	B	C	D	E)
5	(A	B	C	D	E)
6	(A	B	C	D	E)
7	(A	B	C	D	E)
8	(A	B	C	D	E)
9	(A	B	C	D	E)
10	(A	B	C	D	E)
11	(A	B	C	D	E)
12	(A	B	C	D	E)
13	(A	B	C	D	E)
14	(A	B	C	D	E)
15	(A	B	C	D	E)
16	(A	B	C	D	E)
17	(A	B	C	D	E)
18	(A	B	C	D	E)
19	(A	B	C	D	E)
20	(A	B	C	D	E)
21	(A	B	C	D	E)
22	(A	B	C	D	E)
23	(A	B	C	D	E)
24	(A	B	C	D	E)
25	(A	B	C	D	E)

26	(A)	(B)	(C)	(D)	(E)
27	(A)	(B)	(C)	(D)	(E)
28	(A)	(B)	(C)	(D)	(E)
29	(A)	(B)	(C)	(D)	(E)
30	(A)	(B)	(C)	(D)	(E)
31	(A)	(B)	(C)	(D)	(E)
32	(A)	(B)	(C)	(D)	(E)
33	(A)	(B)	(C)	(D)	(E)
34	(A)	(B)	(C)	(D)	(E)
35	(A)	(B)	(C)	(D)	(E)
36	(A)	(B)	(C)	(D)	(E)
37	(A)	(B)	(C)	(D)	(E)
38	(A)	(B)	(C)	(D)	(E)
39	(A)	(B)	(C)	(D)	(E)
40	(A)	(B)	(C)	(D)	(E)
41	(A)	(B)	(C)	(D)	(E)
42	(A)	(B)	(C)	(D)	(E)
43	(A)	(B)	(C)	(D)	(E)
44	(A)	(B)	(C)	(D)	(E)
45	(A)	(B)	(C)	(D)	(E)
46	(A)	(B)	(C)	(D)	(E)
47	(A)	(B)	(C)	(D)	(E)
48	(A)	(B)	(C)	(D)	(E)
49	(A)	(B)	(C)	(D)	(E)
50	(A)	(B)	(C)	(D)	(E)

51	(A	B	C	D	E)
52	(A	B	C	D	E)
53	(A	B	C	D	E)
54	(A	B	C	D	E)
55	(A	B	C	D	E)
56	(A	B	C	D	E)
57	(A	B	C	D	E)
58	(A	B	C	D	E)
59	(A	B	C	D	E)
60	(A	B	C	D	E)
61	(A	B	C	D	E)
62	(A	B	C	D	E)
63	(A	B	C	D	E)
64	(A	B	C	D	E)
65	(A	B	C	D	E)
66	(A	B	C	D	E)
67	(A	B	C	D	E)
68	(A	B	C	D	E)
69	(A	B	C	D	E)
70	(A	B	C	D	E)
71	(A	B	C	D	E)
72	(A	B	C	D	E)
73	(A	B	C	D	E)
74	(A	B	C	D	E)
75	(A	B	C	D	E)

ETS USE ONLY

Exam		0	1	2	3	4	5	6	7	8	9
		0	1	2	3	4	5	6	7	8	9
Exam		0	1	2	3	4	5	6	7	8	9
		0	1	2	3	4	5	6	7	8	9

SELECTED MEDIA EXAMS	R	W	O	OTHER EXAMS	R	W	O
PT02				TOTAL			
PT03				Subscore (if applicable)			
PT04				Subscore (if applicable)			

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

76	(A)	(B)	(C)	(D)	(E)
77	(A)	(B)	(C)	(D)	(E)
78	(A)	(B)	(C)	(D)	(E)
79	(A)	(B)	(C)	(D)	(E)
80	(A)	(B)	(C)	(D)	(E)
81	(A)	(B)	(C)	(D)	(E)
82	(A)	(B)	(C)	(D)	(E)
83	(A)	(B)	(C)	(D)	(E)
84	(A)	(B)	(C)	(D)	(E)
85	(A)	(B)	(C)	(D)	(E)
86	(A)	(B)	(C)	(D)	(E)
87	(A)	(B)	(C)	(D)	(E)
88	(A)	(B)	(C)	(D)	(E)
89	(A)	(B)	(C)	(D)	(E)
90	(A)	(B)	(C)	(D)	(E)

91	(A)	(B)	(C)	(D)	(E)
92	(A)	(B)	(C)	(D)	(E)
93	(A)	(B)	(C)	(D)	(E)
94	(A)	(B)	(C)	(D)	(E)
95	(A)	(B)	(C)	(D)	(E)
96	(A)	(B)	(C)	(D)	(E)
97	(A)	(B)	(C)	(D)	(E)
98	(A)	(B)	(C)	(D)	(E)
99	(A)	(B)	(C)	(D)	(E)
100	(A)	(B)	(C)	(D)	(E)
101	(A)	(B)	(C)	(D)	(E)
102	(A)	(B)	(C)	(D)	(E)
103	(A)	(B)	(C)	(D)	(E)
104	(A)	(B)	(C)	(D)	(E)
105	(A)	(B)	(C)	(D)	(E)

106	(A)	(B)	(C)	(D)	(E)
107	(A)	(B)	(C)	(D)	(E)
108	(A)	(B)	(C)	(D)	(E)
109	(A)	(B)	(C)	(D)	(E)
110	(A)	(B)	(C)	(D)	(E)
111	(A)	(B)	(C)	(D)	(E)
112	(A)	(B)	(C)	(D)	(E)
113	(A)	(B)	(C)	(D)	(E)
114	(A)	(B)	(C)	(D)	(E)
115	(A)	(B)	(C)	(D)	(E)
116	(A)	(B)	(C)	(D)	(E)
117	(A)	(B)	(C)	(D)	(E)
118	(A)	(B)	(C)	(D)	(E)
119	(A)	(B)	(C)	(D)	(E)
120	(A)	(B)	(C)	(D)	(E)

For Students Taking AP Biology

121

-	.	/	/	/	.
1	0	0	0	0	0
2	1	1	1	1	1
3	2	2	2	2	2
4	3	3	3	3	3
5	4	4	4	4	4
6	5	5	5	5	5
7	6	6	6	6	6
8	7	7	7	7	7
9	8	8	8	8	8

122

−	.	/	/	/	.
1	0	0	0	0	0
2	1	1	1	1	1
3	2	2	2	2	2
4	3	3	3	3	3
5	4	4	4	4	4
6	5	5	5	5	5
7	6	6	6	6	6
8	7	7	7	7	7
9	8	8	8	8	8

123

-	.	/	/	/	.
1	0	0	0	0	0
2	1	1	1	1	1
3	2	2	2	2	2
4	3	3	3	3	3
5	4	4	4	4	4
6	5	5	5	5	5
7	6	6	6	6	6
8	7	7	7	7	7
9	8	8	8	8	8

124

-
	1	0	0	0	0
	2	1	1	1	1
	3	2	2	2	2
	4	3	3	3	3
	5	4	4	4	4
	6	5	5	5	5
	7	6	6	6	6
	8	7	7	7	7
	9	8	8	8	8
	9	9	9	9	9

125

-
1	0	0	0	0	0
2	1	1	1	1	1
3	2	2	2	2	2
4	3	3	3	3	3
5	4	4	4	4	4
6	5	5	5	5	5
7	6	6	6	6	6
8	7	7	7	7	7
9	8	8	8	8	8

126

		/	/	/	
-	○	○	○	○	○
	1	0	0	0	0
	2	1	1	1	1
	3	2	2	2	2
	4	3	3	3	3
	5	4	4	4	4
	6	5	5	5	5
	7	6	6	6	6
	8	7	7	7	7
	9	8	8	8	8
	0	9	9	9	9

For Students Taking AP Computer Science Principles, AP Physics 1, or AP Physics 2

131 (A) (B) (C) (D)

132 (A) (B) (C) (D)

133 (A) (B) (C) (D)

134 (A) (B) (C) (D)

135 (A) (B) (C) (D)

136 (A) (B) (C) (D)

137 (A) (B) (C) (D)

138 (A) (B) (C) (D)

139 (A) (B) (C) (D)

140 (A) (B) (C) (D)

141 (A) (B) (C) (D)

142 (A) (B) (C) (D)

[illegible]

DO NOT WRITE IN THIS AREA

Use the address abbreviations from your AP Student Pack. Fill in only one circle per column. Indicate a space in your address by leaving a blank box; do not grid that column.

[illegible]

☐ Female ☐ Male

W. WHICH LANGUAGE DO YOU KNOW BEST?

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

Please answer both questions about Hispanic origin and about race. For the following questions about your identity, Hispanic origins are not races.

(You may mark all that apply.)

a. Are you of Hispanic, Latino, or Spanish origin?

☐ No, not of Hispanic, Latino, or Spanish origin

☐ Yes, Cuban

☐ Yes, Mexican

☐ Yes, Puerto Rican

☐ Yes, another Hispanic, Latino, or Spanish origin

b. What is your race?

☐ American Indian or Alaska Native

☐ Asian (including Indian subcontinent and Philippines origin)

☐ Black or African American (including Africa and Afro-Caribbean origin)

☐ Native Hawaiian or other Pacific Islander

☐ White (including Middle Eastern origin)

In the first column, indicate the highest level of education of one parent/guardian, and indicate whether this is your mother/female guardian or father/male guardian. Then, if applicable, indicate the highest level of education of your other parent/guardian in the second column, and indicate whether this is your mother/female guardian or father/male guardian.

<input type="radio"/>	<input type="radio"/>	Mother or female guardian
<input type="radio"/>	<input type="radio"/>	Father or male guardian
<input type="radio"/>	<input type="radio"/>	Grade school
<input type="radio"/>	<input type="radio"/>	Some high school
<input type="radio"/>	<input type="radio"/>	High school diploma or equivalent
<input type="radio"/>	<input type="radio"/>	Vocational or trade school
<input type="radio"/>	<input type="radio"/>	Some college
<input type="radio"/>	<input type="radio"/>	Associate or two-year degree
<input type="radio"/>	<input type="radio"/>	Bachelor's or four-year degree
<input type="radio"/>	<input type="radio"/>	Some graduate or professional school
<input type="radio"/>	<input type="radio"/>	Graduate or professional degree

**S. FOR STUDENTS OUTSIDE
THE UNITED STATES ONLY**

☐ If your address does not fit in the spaces provided in Item R, fill in as many circles as you can, then fill in the circle in Item S and print the remainder of your address in the spaces provided.

Address	City	State or Province	Country	ZIP or Postal Code
---------	------	-------------------	---------	--------------------

U. EMAIL ADDRESS

By providing your email address, you are granting the College Board permission to use your email address in accordance with the policies in the *2016-17 Bulletin for AP Students and Parents*.

[illegible]

Section I: Multiple-Choice Questions

This is the multiple-choice section of the 2017 AP exam.
It includes cover material and other administrative instructions
to help familiarize students with the mechanics of the exam.
(Note that future exams may differ in look from the following content.)

AP[®] Macroeconomics Exam

SECTION I: Multiple Choice

2017

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

At a Glance

Total Time

1 hour, 10 minutes

Number of Questions

60

Percent of Total Score

66.67%

Writing Instrument

Pencil required

Electronic Device

None allowed

Instructions

Section I of this exam contains 60 multiple-choice questions. Fill in only the circles for numbers 1 through 60 on your answer sheet.

Indicate all of your answers to the multiple-choice questions on the answer sheet. No credit will be given for anything written in this exam booklet, but you may use the booklet for notes or scratch work. After you have decided which of the suggested answers is best, completely fill in the corresponding circle 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. Here is a sample question and answer.

Sample Question Sample Answer

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

Use your time effectively, working as quickly as you can without losing accuracy. Do not spend too much time on any one question. Go on to other questions and come back to the ones you have not answered if you have time. It is not expected that everyone will know the answers to all of the multiple-choice questions.

Your total score on the multiple-choice section is based only on the number of questions answered correctly. Points are not deducted for incorrect answers or unanswered questions.

Form I

Form Code 4NBP4-S

35

The inclusion of source material in this exam is not intended as an endorsement by the College Board or ETS of the content, ideas, or values expressed in the material. The material has been selected by the economics faculty who serve on the AP Macroeconomics Development Committee. In their judgment, the material printed here reflects various aspects of the course of study on which this exam is based and is therefore appropriate to use to measure the skills and knowledge of this course.

MACROECONOMICS

Section I

Time—70 minutes

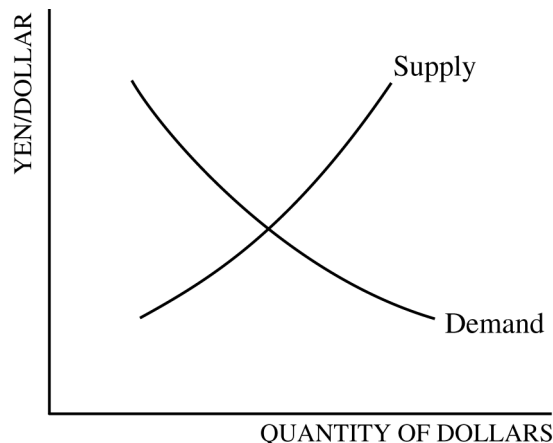
60 Questions

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 circle on the answer sheet.

1. A production possibilities curve that is concave to the origin (bowed out) implies that as more of a good is produced, the opportunity cost
 - (A) remains constant
 - (B) decreases
 - (C) decreases at first and then increases
 - (D) increases
 - (E) increases at first and then decreases
2. In the long run, government subsidies that promote the development of technology with widespread business applications will have which of the following effects?
 - (A) A negative supply shock and lower price level
 - (B) A negative supply shock and lower economic growth rate
 - (C) A positive supply shock and lower price level
 - (D) A positive supply shock and lower economic growth rate
 - (E) A lower aggregate demand and lower price level
3. Olivia volunteers full time at an animal shelter and will not accept any offers for a paid job for the next six months. Olivia is
 - (A) cyclically unemployed
 - (B) not in the labor force
 - (C) employed
 - (D) structurally unemployed
 - (E) a seasonal worker
4. With an expansionary fiscal policy, what will most likely happen to the real gross domestic product (GDP) and the nominal interest rate in the short run?

	<u>Real GDP</u>	<u>Nominal Interest Rate</u>
(A)	Increase	Decrease
(B)	Increase	Increase
(C)	No change	No change
(D)	Decrease	Increase
(E)	Decrease	Decrease
5. Economic growth is best measured by a sustained increase in which of the following?
 - (A) Per capita real gross domestic product
 - (B) Government budget deficits
 - (C) Unemployment in unskilled labor markets
 - (D) Production of public goods
 - (E) Nominal gross domestic product
6. The long-run Phillips curve indicates that there are no trade-offs between
 - (A) aggregate demand and aggregate supply
 - (B) imports and exports
 - (C) consumption and investment
 - (D) consumption and saving
 - (E) inflation and unemployment
7. Assume that a country's government increases borrowing. What will most likely happen to the prices of previously issued bonds and the price level in the short run?

	<u>Bond Prices</u>	<u>Price Level</u>
(A)	Increase	Increase
(B)	Increase	Decrease
(C)	Increase	No change
(D)	Decrease	Increase
(E)	Decrease	Decrease



8. The graph above shows the foreign exchange market for United States dollars in terms of Japanese yen. Assume that there is an increase in United States consumers' preference for Japanese automobiles. Which of the following changes will most likely take place in the market for dollars?

(A) It will take more yen to purchase the same amount of dollars.
 (B) The demand for dollars will increase.
 (C) The supply of dollars will increase.
 (D) Both the demand for and the supply of dollars will decrease.
 (E) There will be no change in the foreign exchange market.

Year	Nominal GDP	GDP Deflator
1980	\$14,000	70
1990	\$18,000	100
2000	\$22,000	220
2010	\$50,000	200
2015	\$60,000	300

9. According to the data above, in which year was real gross domestic product (GDP) the largest?

(A) 1980
 (B) 1990
 (C) 2000
 (D) 2010
 (E) 2015

10. Which of the following will happen if a country's government reduces business taxes?
- (A) The short-run Phillips curve will shift to the right.
 (B) The short-run aggregate supply curve will shift to the right.
 (C) The long-run aggregate supply curve will shift to the left.
 (D) The aggregate demand curve will shift to the left.
 (E) The demand curve for loanable funds will shift to the left.

11. In the coffee market, which of the following changes will increase the price and decrease the quantity of coffee?

<u>Supply</u>	<u>Demand</u>
(A) Increase	Increase
(B) Increase	Decrease
(C) Decrease	Increase
(D) No change	Increase
(E) Decrease	No change

12. An increase in inventories will increase which component of gross domestic product?

(A) Personal consumption expenditures
 (B) Investment expenditures
 (C) Government purchases
 (D) Exports
 (E) Imports

13. If real output is \$9,000, and the price level is 2, and the velocity of money is 3, then the money supply is

(A) \$3,000
 (B) \$4,500
 (C) \$6,000
 (D) \$18,000
 (E) \$27,000

14. Which of the following combinations of fiscal and monetary policy will reduce the price level?

Fiscal Policy

- (A) Increasing government spending
- (B) Increasing government spending
- (C) Decreasing government spending
- (D) Decreasing government spending
- (E) Decreasing taxes

Monetary Policy

- Buying government bonds
- Selling government bonds
- Buying government bonds
- Selling government bonds
- Decreasing the discount rate

15. All of the following may result in increases in real gross domestic product in the long run EXCEPT

- (A) technical progress
- (B) investment in human capital
- (C) discovery of new natural resources
- (D) decrease in corporate taxes
- (E) decrease in factor productivity

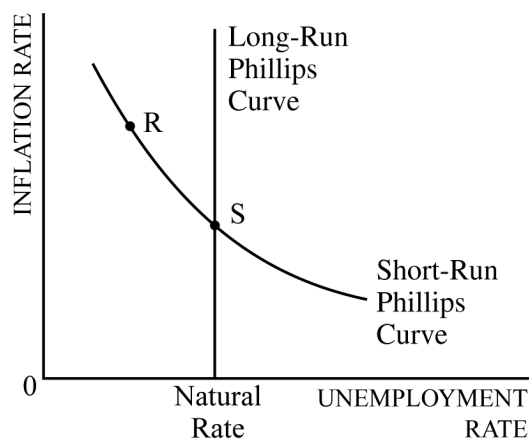
16. If government spending increases and at the same time a country's central bank sells bonds in the open market, the interest rate and private investment in plant and equipment (P&E) will most likely change in which of the following ways?

Interest Rate

- (A) Increase
- (B) Increase
- (C) Increase
- (D) No change
- (E) Decrease

Private
Investment
in P&E

- Increase
- Decrease
- No change
- Decrease
- Decrease

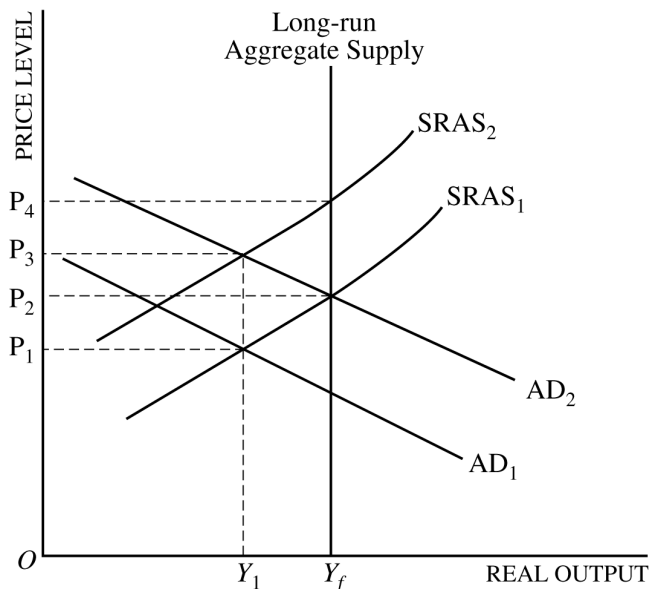


17. Which of the following would cause a movement from point S to point R on the short-run Phillips curve above?
- (A) An unanticipated increase in government spending
 - (B) An unanticipated adverse supply shock
 - (C) A decrease in net investment
 - (D) An increase in real interest rates
 - (E) An increase in the labor-force participation rate
18. If policy makers use fiscal policy to reduce inflation, which of the following will most likely happen in the short run?
- (A) The unemployment rate will decrease.
 - (B) The unemployment rate will increase.
 - (C) The real interest rate will increase.
 - (D) The nominal interest rate will increase.
 - (E) The economy will remain at the natural rate of unemployment.
19. Crowding out occurs when investment spending by the private sector decreases as a result of
- (A) decreasing interest rates caused by an increase in the supply of government bonds
 - (B) decreasing interest rates caused by a decrease in the demand for loanable funds
 - (C) decreasing interest rates caused by an increase in government borrowing
 - (D) increasing interest rates caused by an increase in government borrowing
 - (E) increasing interest rates caused by a decrease in government borrowing
20. Assume that a nation's real gross domestic product (GDP) grows at a higher rate than its population over a given period of time. It can be concluded that
- (A) the population will grow at a faster rate in the future
 - (B) the price level has decreased
 - (C) real GDP per capita has increased
 - (D) real GDP will rise at a slower rate in the future
 - (E) real GDP will rise at a faster rate in the future

21. Assume that banks hold no excess reserves. A decrease in the required reserve ratio will cause total reserves in banks, the money multiplier, and the money supply to change in which of the following ways?

<u>Total Reserves</u>	<u>Money Multiplier</u>	<u>Money Supply</u>
(A) Increase	Increase	Increase
(B) Increase	No change	Increase
(C) No change	Increase	Decrease
(D) Decrease	Decrease	Decrease
(E) No change	Increase	Increase

22. If the consumer price index increases from 200 to 240 in a one-year period, then the inflation rate is
- (A) 16.67 percent
 - (B) 20 percent
 - (C) 25 percent
 - (D) 40 percent
 - (E) 140 percent
23. In the long run, a fully anticipated expansion of the money supply will
- (A) increase both the price level and real gross domestic product
 - (B) increase the price level and decrease the real wage
 - (C) increase both the price level and the real wage
 - (D) increase both the nominal gross domestic product and the price level
 - (E) increase both the nominal and real gross domestic product
24. Which of the following policy actions will promote long-run economic growth?
- (A) Decreasing the investment tax credit
 - (B) Decreasing the money supply
 - (C) Increasing unemployment compensation
 - (D) Increasing investment in human capital
 - (E) Increasing tax rates on savings income
25. Which of the following transactions would increase the current account surplus in Japan's balance of payments accounts?
- (A) A Japan-based company sells roasted coffee to Canada.
 - (B) Mari, a Japanese investor, buys stocks in a Japanese company.
 - (C) Bob, a Canadian, buys stocks in a Japanese company.
 - (D) A Japan-based company buys a piece of equipment from Germany.
 - (E) Artois, a French citizen, works at a Japanese company in Paris.
26. Suppose countries Alphanica and Betania produce electronics and apparel using identical resources. Which of the following is true if Alphanica exports electronics to and imports apparel from Betania within a free-trade system ?
- (A) The opportunity cost of producing electronics is higher in Alphanica than in Betania.
 - (B) Betania has a comparative advantage in producing apparel, and Alphanica has a comparative advantage in producing electronics.
 - (C) Alphanica must be specializing in apparel, while Betania is specializing in electronics.
 - (D) Workers in Alphanica can produce more apparel per hour than workers in Betania.
 - (E) Consumers in Betania buy more electronics than consumers in Alphanica.



27. Based on the graph above, demand-pull inflation is caused by a movement from
- SRAS₁ to SRAS₂
 - SRAS₂ to SRAS₁
 - AD₁ to AD₂
 - AD₂ to AD₁
 - Y_f to Y₁
28. A decrease in taxes will necessarily result in an increase in which of the following?
- Nominal gross domestic product
 - Unemployment
 - Exports
 - Marginal propensity to save
 - Money supply
29. Which of the following will cause an increase in the equilibrium real interest rate?
- An increase in investment demand
 - An increase in national saving
 - An increase in the government budget surplus
 - A decrease in the government budget deficit
 - The purchase of government bonds by the central bank
30. Which of the following will most likely promote long-run economic growth?
- Increasing taxes on interest earned from savings
 - Increasing consumption spending on food and entertainment
 - Increasing funding for research and development
 - Decreasing funding for law enforcement and judicial systems
 - Rapidly harvesting timber and mineral resources
31. In the foreign exchange market, the exchange rate is defined as
- the price of one currency in terms of another currency
 - the price of goods around the world
 - the price of a good in terms of another good
 - the discount that companies take when goods are returned
 - the quantity of a good to be traded for a unit of another good
32. A nation's unemployment rate is the ratio of the number of unemployed seeking employment to the nation's
- labor force
 - potential gross domestic product
 - number of employed
 - working-age population
 - total population
33. An open-market operation by a country's central bank to reduce the unemployment rate would be to
- sell bonds to decrease the interest rate and to increase aggregate demand
 - sell bonds to increase the interest rate and to decrease aggregate demand
 - sell bonds to increase the interest rate and to increase investment
 - buy bonds to decrease the interest rate and to decrease aggregate demand
 - buy bonds to decrease the interest rate and to increase aggregate demand

34. Assume that the marginal propensity to consume is 0.75, net exports decline by \$10 billion, and government spending increases by \$20 billion. Given that there is no crowding out, the equilibrium gross domestic product can increase by a maximum of
- (A) \$7.5 billion
(B) \$15 billion
(C) \$40 billion
(D) \$80 billion
(E) \$120 billion
35. Which of the following results when the Federal Reserve sells bonds to commercial banks?
- (A) The total assets held by commercial banks will eventually increase.
(B) The money supply decreases.
(C) The discount rate increases.
(D) The public increases its cash holdings.
(E) The required reserve ratio increases because of decreasing excess reserves.
36. Which of the following is true of a current account deficit?
- (A) It is caused by a trade surplus.
(B) It must be financed with an equally large surplus of exports.
(C) It is caused by a deficit in the financial (capital) account.
(D) It will self-correct in the following year.
(E) It is financed by a surplus in the financial (capital) account.
37. Ying has just graduated from college and is now interviewing for jobs. Ying would best be described as
- (A) cyclically unemployed
(B) frictionally unemployed
(C) structurally unemployed
(D) not in the labor force
(E) a discouraged worker
38. Which of the following combinations of changes in income taxes, real interest rate, and investment spending is most likely to promote economic growth?
- | | <u>Income taxes</u> | <u>Interest Rate</u> | <u>Investment</u> |
|-----|---------------------|----------------------|-------------------|
| (A) | Increase | Increase | Increase |
| (B) | Increase | Increase | Decrease |
| (C) | Increase | Decrease | Decrease |
| (D) | Decrease | Decrease | Decrease |
| (E) | Decrease | Decrease | Increase |
39. Assume that the United States central bank sells government bonds on the open market. How will the sale affect the value of the United States dollar on the foreign exchange market and United States exports?
- | | <u>Value of the Dollar</u> | <u>Exports</u> |
|-----|----------------------------|----------------|
| (A) | Increase | Decrease |
| (B) | No change | Decrease |
| (C) | Decrease | Decrease |
| (D) | Decrease | Increase |
| (E) | Increase | Increase |
40. If a country has a balanced budget and then the country's government increases transfer payments without increasing taxes, which of the following will most likely occur?
- (A) The government's budget will move into surplus, and the national debt will fall.
(B) The government's budget will move into surplus, and the national debt will rise.
(C) The government's budget will move into deficit, and the national debt will fall.
(D) The government's budget will move into deficit, and the national debt will rise.
(E) The government's budget will move into surplus, and the national debt will remain unchanged.
41. As an indicator of an impending recession, inventories will most likely
- (A) decrease as a result of a decrease in consumption
(B) increase as a result of a decrease in consumption
(C) increase as a result of a decrease in aggregate supply
(D) decrease as a result of an increase in aggregate supply
(E) remain constant as a result of economic uncertainty

42. Which of the following would most likely benefit from unexpected deflation?
- (A) Lenders
 - (B) Borrowers
 - (C) Retail shop owners
 - (D) Governments in debt
 - (E) Automobile manufacturing firms
43. An economy is at full-employment equilibrium. If consumers and firms become more optimistic about future income and profits, which of the following will occur in the short run?
- (A) Aggregate demand will shift rightward, increasing real output and decreasing the price level.
 - (B) Aggregate demand will shift rightward, decreasing real output and increasing the price level.
 - (C) Aggregate demand will shift rightward, increasing real output and the price level.
 - (D) Short-run aggregate supply will shift rightward, increasing real output and the price level.
 - (E) Short-run aggregate supply will shift rightward, decreasing real output and the price level.
44. The demand curve for money shifts to the right when
- (A) the nominal interest rate decreases
 - (B) the nominal gross domestic product increases
 - (C) the real gross domestic product decreases
 - (D) inflation decreases
 - (E) the velocity of money increases
45. An increase in both the inflation rate and the unemployment rate can be illustrated by
- (A) a movement along the short-run Phillips curve
 - (B) a rightward shift of the short-run Phillips curve
 - (C) a leftward shift of the short-run Phillips curve
 - (D) a rightward shift of the aggregate demand curve
 - (E) a leftward shift of the aggregate demand curve

46. Assume Country X has the following international transactions, in billions of dollars, during a given period of time.

International Transactions	Value (\$)
Exports	400
Imports	330
Foreign purchases of Country X's assets	210
Country X's purchase of foreign assets	280

What is the balance on the current account, in billions of dollars, for the period?

- (A) -140
 - (B) -70
 - (C) -0
 - (D) +70
 - (E) +140
47. In the short run, a tight monetary policy tends to cause
- (A) a decrease in the interest rate and a decrease in prices
 - (B) a decrease in the interest rate and an increase in private investment
 - (C) a decrease in prices and an increase in private investment
 - (D) an increase in the interest rate and an increase in private investment
 - (E) an increase in interest rate and a decrease in private investment
48. If the required reserve ratio is 10 percent, what is the maximum change in the money supply from John's deposit of \$50,000 cash into his checking account?
- (A) \$5,000
 - (B) \$45,000
 - (C) \$55,000
 - (D) \$450,000
 - (E) \$500,000
49. Recession can be caused by
- (A) an increase in the price level
 - (B) an increase in exports
 - (C) a decrease in interest rates
 - (D) a decrease in aggregate demand
 - (E) a decrease in wages

50. An increase in the number of discouraged workers causes the unemployment rate to
- (A) decrease along with the labor-force participation rate
 - (B) increase while the labor-force participation rate decreases
 - (C) stay the same because the workers are still unemployed
 - (D) decrease while the labor-force participation rate stays the same
 - (E) increase along with the labor-force participation rate
51. Which of the following will most likely result in an increase in aggregate demand?
- (A) An increase in the interest rates charged on credit card balances
 - (B) A disruption in global oil supply
 - (C) An open-market purchase of government bonds by the central bank
 - (D) A reduction of pay and benefits for government employees
 - (E) A decrease in the wealth of households
52. For Arthur's graduation gift, Arthur's grandmother gives him a choice: he can receive \$1,000 today or \$1,050 one year from today. At what annual interest rate would Arthur be indifferent to choosing between the two options?
- (A) 50%
 - (B) 10%
 - (C) 5%
 - (D) 2.5%
 - (E) 0.5%
53. Assume a country's economy is currently in long-run equilibrium. What is the long-run effect of an increase in aggregate demand?
- (A) A decrease in the unemployment rate
 - (B) A decrease in the inflation rate
 - (C) A decrease in the long-run aggregate supply
 - (D) An increase in the price level
 - (E) An increase in the money supply
54. If foreign financial investors no longer see country A as a safe haven, which of the following will most likely occur in the short run?
- (A) Country A's currency will appreciate.
 - (B) Country A's currency will depreciate.
 - (C) Country A's current account will move toward deficit.
 - (D) Country A's financial account will move toward surplus.
 - (E) Tariff revenues received by country A will decrease as investors seek investment elsewhere.
55. If the government has increased the budget deficit and interest rates have remained constant, which of the following is true?
- (A) Government spending is less than tax revenue, and the central bank increases the money supply.
 - (B) Government spending is greater than tax revenue, and the central bank keeps the money supply constant.
 - (C) Government spending is greater than tax revenue, and the central bank increases the money supply.
 - (D) Government spending is greater than tax revenue, and the central bank decreases the money supply.
 - (E) Government spending is less than tax revenue, and the central bank keeps the money supply constant.
56. Suppose that the real interest rate is equal to seven percent and the expected inflation rate is currently three percent. If an oil crisis in the Middle East increases the expected inflation rate to four percent, the new nominal interest rate is equal to
- (A) 3%
 - (B) 4%
 - (C) 7%
 - (D) 11%
 - (E) 14%

57. Government investment in human capital is likely to shift
- (A) the aggregate demand curve to the right in the short run and the aggregate supply curve to the right in the long run
 - (B) the aggregate demand curve to the left in the short run and the aggregate supply curve to the left in the long run
 - (C) the aggregate demand curve to the right in the short run and the long-run Phillips curve to the right
 - (D) the aggregate demand curve to the left in the long run
 - (E) the aggregate demand curve to the left in the short run and the long-run Phillips curve to the left
58. The consumer price index (CPI) does not measure the true cost of inflation because
- (A) improvements in the quality of goods or services are not fully reflected
 - (B) lenders are better off when actual inflation is less than anticipated inflation
 - (C) borrowers are better off when actual inflation is greater than anticipated inflation
 - (D) changes in consumers' real income are not accounted for
 - (E) consumers may substitute toward more expensive goods without being significantly worse off
59. Which of the following statements about inflation is true in the short run?
- (A) During a period of cost-push inflation, the economy's output will rise rapidly, along with the price level.
 - (B) The basic difference between cost-push and demand-pull inflation lies in the rate at which the price level is rising.
 - (C) During a period of demand-pull inflation, the economy's output will be stagnant when the price level is rising.
 - (D) The economy's real output increases when there is demand-pull inflation and decreases when there is cost-push inflation.
 - (E) Most instances of inflation start out being cost-push, and then turn into demand-pull.
60. Which of the following policy actions will directly increase the money supply?
- (A) The central bank purchases government bonds on the open market.
 - (B) The central bank sells government bonds on the open market.
 - (C) The government increases taxes without changing its spending.
 - (D) The government decreases taxes without changing its spending.
 - (E) The government decreases taxes while simultaneously decreasing its spending.

END OF SECTION I

**IF YOU FINISH BEFORE TIME IS CALLED, YOU MAY
CHECK YOUR WORK ON THIS SECTION.**

DO NOT GO ON TO SECTION II UNTIL YOU ARE TOLD TO DO SO.

MAKE SURE YOU HAVE DONE THE FOLLOWING.

- **PLACED YOUR AP NUMBER LABEL ON YOUR ANSWER SHEET**
- **WRITTEN AND GRIDDED YOUR AP NUMBER CORRECTLY ON YOUR ANSWER SHEET**
- **TAKEN THE AP EXAM LABEL FROM THE FRONT OF THIS BOOKLET AND PLACED IT ON YOUR ANSWER SHEET**

Section II: Free-Response Questions

This is the free-response section of the 2017 AP exam.
It includes cover material and other administrative instructions
to help familiarize students with the mechanics of the exam.
(Note that future exams may differ in look from the following content.)

AP[®] Macroeconomics Exam

SECTION II: Free Response

2017

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

At a Glance

Total Time

1 hour

Number of Questions

3

Percent of Total Score

33.33%

Writing Instrument

Pen with black or dark blue ink

Electronic Device

None allowed

Reading Period

Time

10 minutes. Use this time to read the questions and plan your answers. You may begin writing your responses before the reading period is over.

Writing Period

Time

50 minutes

Question 1

Suggested Time

25 minutes

Percent of Section II Score

50%

Question 2

Suggested Time

12.5 minutes

Percent of Section II Score

25%

Question 3

Suggested Time

12.5 minutes

Percent of Section II Score

25%

IMPORTANT Identification Information

PLEASE PRINT WITH PEN:

1. First two letters of your last name

First letter of your first name

2. Date of birth

Month Day Year

3. Six-digit school code

4. Unless I check the box below, I grant the College Board the unlimited right to use, reproduce, and publish my free-response materials, both written and oral, for educational research and instructional purposes. My name and the name of my school will not be used in any way in connection with my free-response materials. I understand that I am free to mark "No" with no effect on my score or its reporting.

No, I do not grant the College Board these rights. ☐

Instructions

The questions for Section II are printed in this booklet. You may use page 3 and the pages the questions are printed on to organize your answers and for scratch work, but you must write your answers on the lined pages provided for each question.

The proctor will announce the beginning and end of the reading period. You are advised to spend the 10-minute period reading all the questions and planning your answers. You may begin writing your responses before the reading period is over.

Write clearly and legibly. Do not skip lines. Cross out any errors you make; crossed-out work will not be scored.

Manage your time carefully. You may proceed freely from one question to the next. You may review your responses if you finish before the end of the exam is announced.

Form I

Form Code 4NBP4-S

35

MACROECONOMICS

Section II

Total Time—60 minutes

Reading Period—10 minutes

Writing Period—50 minutes

Directions: You are advised to spend the first 10 minutes reading all of the questions and planning your answers. You will then have 50 minutes to answer all three of the following questions. You may begin writing your responses before the reading period is over. It is suggested that you spend approximately half your time on the first question and divide the remaining time equally between the next two questions. Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. Use a pen with black or dark blue ink.

Question 1 begins on page 4.

Question 2 begins on page 10.

Question 3 begins on page 14.

THIS PAGE MAY BE USED FOR TAKING NOTES AND PLANNING YOUR ANSWERS.

NOTES WRITTEN ON THIS PAGE WILL NOT BE SCORED.

WRITE ALL YOUR RESPONSES ON THE LINED PAGES.

GO ON TO THE NEXT PAGE.

1. Assume that a country's economy is in a short-run equilibrium and the actual unemployment rate is lower than the natural rate of unemployment.
- (a) Using a correctly labeled graph of the long-run aggregate supply curve, short-run aggregate supply curve, and aggregate demand curve, show each of the following.
 - (i) Current price level, labeled PL_1 , and current output level, labeled Y_1
 - (ii) The full-employment output level, labeled Y_F
 - (b) What open-market operation can the country's central bank use to move the economy toward its long-run equilibrium?
 - (c) Use a correctly labeled money-market graph to show how the country's central bank action to move the economy toward its long-run equilibrium affects the equilibrium nominal interest rate in the short run.
 - (d) Based on the interest rate change from part (c), will each of the following increase, decrease, or remain the same in the short run?
 - (i) Real output. Explain.
 - (ii) Natural rate of unemployment
 - (e) Assume instead that the central bank does not pursue the monetary policy action from part (b) and there was no other government intervention. Will each of the following increase, decrease, or remain the same in the long run?
 - (i) Short-run aggregate supply. Explain.
 - (ii) Employment

THIS PAGE MAY BE USED FOR TAKING NOTES AND PLANNING YOUR ANSWERS.

NOTES WRITTEN ON THIS PAGE WILL NOT BE SCORED.

WRITE ALL YOUR RESPONSES ON THE LINED PAGES.

[illegible]

Question 1 is reprinted for your convenience.

1. Assume that a country's economy is in a short-run equilibrium and the actual unemployment rate is lower than the natural rate of unemployment.
 - (a) Using a correctly labeled graph of the long-run aggregate supply curve, short-run aggregate supply curve, and aggregate demand curve, show each of the following.
 - (i) Current price level, labeled PL_1 , and current output level, labeled Y_1
 - (ii) The full-employment output level, labeled Y_F
 - (b) What open-market operation can the country's central bank use to move the economy toward its long-run equilibrium?
 - (c) Use a correctly labeled money-market graph to show how the country's central bank action to move the economy toward its long-run equilibrium affects the equilibrium nominal interest rate in the short run.
 - (d) Based on the interest rate change from part (c), will each of the following increase, decrease, or remain the same in the short run?
 - (i) Real output. Explain.
 - (ii) Natural rate of unemployment
 - (e) Assume instead that the central bank does not pursue the monetary policy action from part (b) and there was no other government intervention. Will each of the following increase, decrease, or remain the same in the long run?
 - (i) Short-run aggregate supply. Explain.
 - (ii) Employment

THIS PAGE MAY BE USED FOR TAKING NOTES AND PLANNING YOUR ANSWERS.

NOTES WRITTEN ON THIS PAGE WILL NOT BE SCORED.

WRITE ALL YOUR RESPONSES ON THE LINED PAGES.

[illegible]

[illegible]

[illegible]

2. The following is the balance sheet for Raymond Bank, one of many commercial banks in a country.

Assets		Liabilities and Equity	
Reserves	\$5,000	Demand deposits	\$20,000
Business loans	\$10,000		
Student loans	\$8,000		
Government securities	\$2,000	Equity (Net worth)	\$5,000
Total assets	\$25,000	Total liabilities and equity	\$25,000

Assume a 10 percent reserve requirement.

- (a) Calculate Raymond Bank's required reserves.
- (b) Calculate the maximum amount of additional loans that Raymond Bank can make without selling its holdings of government securities.
- (c) Assuming that Raymond Bank and other banks now lend out all excess reserves, calculate the maximum possible change in the following.
 - (i) Demand deposits throughout the banking system
 - (ii) Total reserves throughout the banking system
- (d) Suppose that the country's central bank purchases \$1,000 of Raymond Bank's holdings of government securities as part of its open-market operations. Do Raymond Bank's required reserves initially increase, decrease, or remain the same as a result of the central bank's purchase? Explain.

THIS PAGE MAY BE USED FOR TAKING NOTES AND PLANNING YOUR ANSWERS.

NOTES WRITTEN ON THIS PAGE WILL NOT BE SCORED.

WRITE ALL YOUR RESPONSES ON THE LINED PAGES.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

[illegible]

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, leaving small margins at the top and bottom. There are no vertical margin lines, text, or other markings on the page.

3. Singapore and Japan are trading partners. The Japanese economy is operating at full employment, and Japan's current account balance is zero.
- (a) Assume the exchange rate between the Singapore dollar (SGD) and the Japanese yen (JPY) changes from $1 \text{ SGD} = 82 \text{ JPY}$ to $1 \text{ SGD} = 65 \text{ JPY}$. Does the JPY appreciate or depreciate against the SGD?
 - (b) Given your answer in part (a), will each of the following increase, decrease, or remain the same?
 - (i) The price of Japanese goods in Singapore dollars
 - (ii) Japan's net exports
 - (c) Draw a single correctly labeled graph with the long-run Phillips curve and short-run Phillips curve for Japan. On the graph, show the new short-run equilibrium as a result of the change in Japan's net exports from part (b)(ii), labeled point X.
 - (d) Given your answer in part (b)(ii), will each of the following be in deficit, surplus, or zero for Japan?
 - (i) Current account balance
 - (ii) Financial (capital) account balance
-

THIS PAGE MAY BE USED FOR TAKING NOTES AND PLANNING YOUR ANSWERS.

NOTES WRITTEN ON THIS PAGE WILL NOT BE SCORED.

WRITE ALL YOUR RESPONSES ON THE LINED PAGES.

[illegible]

[illegible]

[illegible]

STOP

END OF EXAM

THE FOLLOWING INSTRUCTIONS APPLY TO THE COVERS OF THE SECTION II BOOKLET.

- **MAKE SURE YOU HAVE COMPLETED THE IDENTIFICATION INFORMATION AS REQUESTED ON THE FRONT AND BACK COVERS OF THE SECTION II BOOKLET.**
- **CHECK TO SEE THAT YOUR AP NUMBER LABEL APPEARS IN THE BOX ON THE COVER.**
- **MAKE SURE YOU HAVE USED THE SAME SET OF AP NUMBER LABELS ON ALL AP EXAMS YOU HAVE TAKEN THIS YEAR.**

Multiple-Choice Answer Key

The following contains the answers to the multiple-choice questions in this exam.

**Answer Key for AP Macroeconomics
Practice Exam, Section I**

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

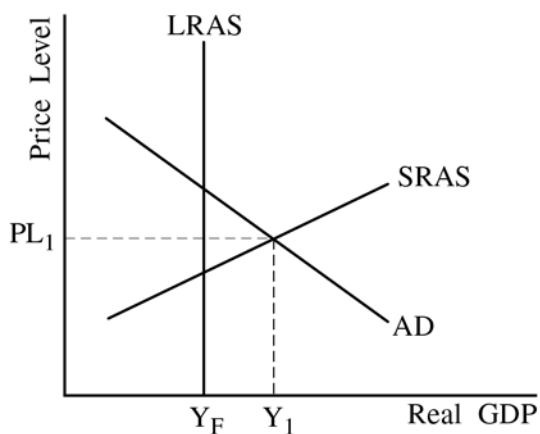
Free-Response Scoring Guidelines

The following contains the scoring guidelines for the free-response questions in this exam.

**AP[®] MACROECONOMICS
2017 SCORING GUIDELINES**

Question 1

9 points: 2+1+2+2+2



(a) 2 points:

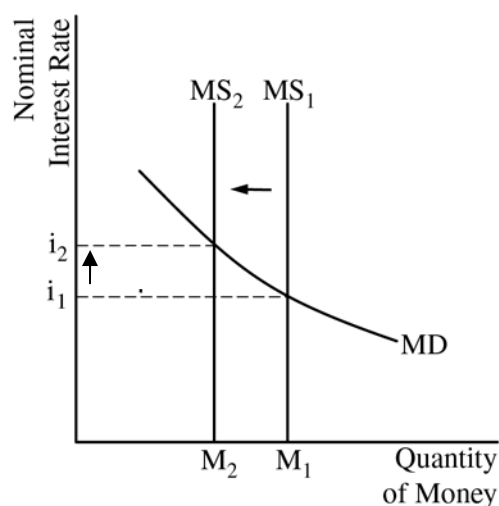
- One point is earned for drawing a correctly labeled graph showing a downward-sloping AD curve, an upward-sloping SRAS curve, equilibrium price level, PL_1 , and output level, Y_1 .
- One point is earned for showing a vertical LRAS curve at Y_F to the left of the equilibrium output level.

(b) 1 point:

- One point is earned for stating that the central bank can sell bonds.

**AP[®] MACROECONOMICS
2017 SCORING GUIDELINES**

Question 1 (continued)



(c) 2 points:

- One point is earned for drawing a correctly labeled graph of the money market.
- One point is earned for showing a leftward shift in the money supply curve, resulting in a higher nominal interest rate.

(d) 2 points:

- One point is earned for stating that real output will decrease and for explaining that interest-sensitive spending will decrease, resulting in a decrease in aggregate demand and real output.
- One point is earned for stating that the natural rate of unemployment will remain unchanged.

(e) 2 points:

- One point is earned for stating that the short-run aggregate supply (SRAS) curve will shift to the left in the long run and for explaining that nominal wages will increase.
- One point is earned for stating that employment will decrease.

AP[®] MACROECONOMICS
2017 SCORING GUIDELINES

Question 2

6 points: 1+1+2+2

(a) 1 point:

- One point is earned for correctly calculating Raymond Bank's required reserves,
 $0.10 \times \$20,000 = \$2,000$.

(b) 1 point:

- One point is earned for correctly calculating the maximum amount of loans that Raymond Bank can make, \$3,000.
 $\text{Excess Reserves} = \text{Total Reserves} - \text{Required Reserves} = \$5,000 - \$2,000 = \$3,000$

(c) 2 points:

- One point is earned for correctly calculating the maximum possible change in demand deposits throughout the banking system, \$30,000.
 $\text{Maximum change in deposits} = \text{Excess Reserves} \times \text{Money Multiplier}$
 $= \$3,000 \times 1/0.1 = \$30,000$
- One point is earned for stating that the maximum possible change in total reserves throughout the banking system is \$0.

(d) 2 points:

- One point is earned for stating that Raymond Bank's required reserves initially will remain the same.
- One point is earned for stating that there is no change in demand deposits, **OR** that only excess reserves increased.

**AP[®] MACROECONOMICS
2017 SCORING GUIDELINES**

Question 3

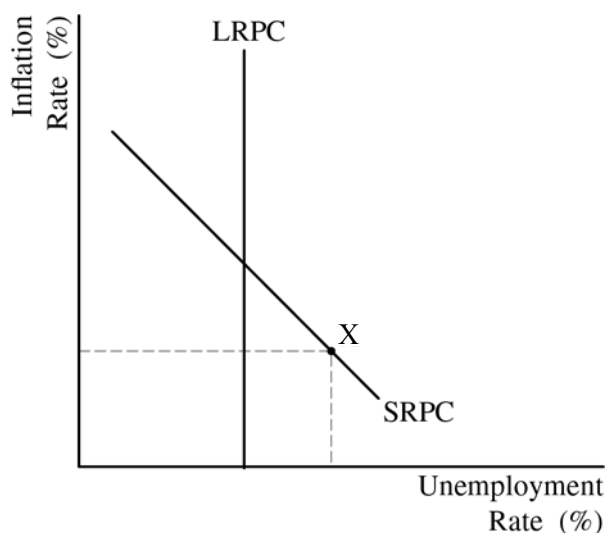
6 points: 1+2+2+1

(a) 1 point:

- One point is earned for stating that JPY appreciates relative to the SGD.

(b) 2 points:

- One point is earned for stating that the price of Japanese goods in Singapore dollars will increase.
- One point is earned for stating that Japan's net exports will decrease.



(c) 2 points:

- One point is earned for drawing a correctly labeled graph of the downward-sloping short-run Phillips curve (SRPC) for Japan.
- One point is earned for showing a vertical long-run Phillips curve (LRPC) and for showing point X to the right of the LRPC on the SRPC.

(d) 1 point:

- One point is earned for stating that Japan's current account balance will be in deficit and that Japan's financial (capital) account balance will be in surplus.

Scoring Worksheet

The following provides a scoring worksheet and conversion table used for calculating a composite score of the exam.

2017 AP Macroeconomics Scoring Worksheet

Section I: Multiple Choice

$$\frac{\text{Number Correct}}{\text{(out of 60)}} \times 1.0000 = \frac{\text{Weighted Section I Score}}{\text{(Do not round)}}$$

Section II: Free Response

$$\text{Question 1} \quad \frac{\text{_____}}{\text{(out of 9)}} \times 1.6666 = \frac{\text{_____}}{\text{(Do not round)}}$$

$$\text{Question 2} \quad \frac{\text{_____}}{\text{(out of 6)}} \times 1.2500 = \frac{\text{_____}}{\text{(Do not round)}}$$

$$\text{Question 3} \quad \frac{\text{_____}}{\text{(out of 6)}} \times 1.2500 = \frac{\text{_____}}{\text{(Do not round)}}$$

$$\text{Sum} = \frac{\text{Weighted Section II Score}}{\text{(Do not round)}}$$

Composite Score

$$\frac{\text{Weighted Section I Score}}{\text{_____}} + \frac{\text{Weighted Section II Score}}{\text{_____}} = \frac{\text{Composite Score}}{\text{(Round to nearest whole number)}}$$

AP Score Conversion Chart
Macroeconomics

Composite Score Range	AP Score
73-90	5
60-72	4
50-59	3
39-49	2
0-38	1

Question Descriptors and Performance Data

The following contains tables showing the content assessed, the correct answer, and how AP students performed on each question.

2017 AP Macroeconomics

Question Descriptors and Performance Data

Multiple-Choice Questions

Question	Topic	Key	% Correct
1	Basic economic concepts	D	65
2	Inflation\Unemployment and Stabilization Policies	C	88
3	Measurement of economic performance	B	74
4	National income and price determination	B	44
5	Basic economic concepts	A	79
6	Inflation\Unemployment and Stabilization Policies	E	82
7	Financial Sector	D	33
8	Open Economy: International Trade and Finance	C	58
9	Measurement of economic performance	D	65
10	Inflation\Unemployment and Stabilization Policies	B	70
11	Basic economic concepts	E	57
12	Measurement of economic performance	B	57
13	Financial Sector	C	65
14	Inflation\Unemployment and Stabilization Policies	D	56
15	Economic Growth and Productivity	E	76
16	Inflation\Unemployment and Stabilization Policies	B	57
17	Inflation\Unemployment and Stabilization Policies	A	52
18	National income and price determination	B	66
19	National income and price determination	D	70
20	Measurement of economic performance	C	79
21	Financial Sector	E	49
22	Measurement of economic performance	B	69
23	Inflation\Unemployment and Stabilization Policies	D	24
24	Economic Growth and Productivity	D	83
25	Open Economy: International Trade and Finance	A	61
26	Basic economic concepts	B	85
27	Inflation\Unemployment and Stabilization Policies	C	74
28	National income and price determination	A	42
29	Financial Sector	A	46
30	Economic Growth and Productivity	C	80
31	Open Economy: International Trade and Finance	A	87
32	Basic economic concepts	A	82
33	Inflation\Unemployment and Stabilization Policies	E	66
34	National income and price determination	C	48
35	Financial Sector	B	66
36	Open Economy: International Trade and Finance	E	50
37	Measurement of economic performance	B	72
38	Economic Growth and Productivity	E	82

2017 AP Macroeconomics

Question Descriptors and Performance Data

Question	Topic	Key	% Correct
39	Open Economy: International Trade and Finance	A	50
40	Inflation\Unemployment and Stabilization Policies	D	77
41	Basic economic concepts	B	51
42	Measurement of economic performance	A	56
43	National income and price determination	C	71
44	Financial Sector	B	27
45	Inflation\Unemployment and Stabilization Policies	B	72
46	Open Economy: International Trade and Finance	D	38
47	Inflation\Unemployment and Stabilization Policies	E	55
48	Financial Sector	D	41
49	National income and price determination	D	65
50	Measurement of economic performance	A	41
51	National income and price determination	C	78
52	Financial Sector	C	71
53	Inflation\Unemployment and Stabilization Policies	D	64
54	Open Economy: International Trade and Finance	B	68
55	Inflation\Unemployment and Stabilization Policies	C	32
56	Financial Sector	D	60
57	Economic Growth and Productivity	A	68
58	Measurement of economic performance	A	36
59	Inflation\Unemployment and Stabilization Policies	D	53
60	Financial Sector	A	70

AP Macroeconomics

The College Board

The College Board is a mission-driven not-for-profit organization that connects students to college success and opportunity. Founded in 1900, the College Board was created to expand access to higher education. Today, the membership association is made up of over 6,000 of the world's leading educational institutions and is dedicated to promoting excellence and equity in education. Each year, the College Board helps more than seven million students prepare for a successful transition to college through programs and services in college readiness and college success — including the SAT® and the Advanced Placement Program®. The organization also serves the education community through research and advocacy on behalf of students, educators, and schools. The College Board is committed to the principles of excellence and equity, and that commitment is embodied in all of its programs, services, activities, and concerns.