



## **AP<sup>®</sup> Macroeconomics 2005 Sample Student Responses**

### **The College Board: Connecting Students to College Success**

The College Board is a not-for-profit membership association whose mission is to connect students to college success and opportunity. Founded in 1900, the association is composed of more than 4,700 schools, colleges, universities, and other educational organizations. Each year, the College Board serves over three and a half million students and their parents, 23,000 high schools, and 3,500 colleges through major programs and services in college admissions, guidance, assessment, financial aid, enrollment, and teaching and learning. Among its best-known programs are the SAT<sup>®</sup>, the PSAT/NMSQT<sup>®</sup>, and the Advanced Placement Program<sup>®</sup> (AP<sup>®</sup>). 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.

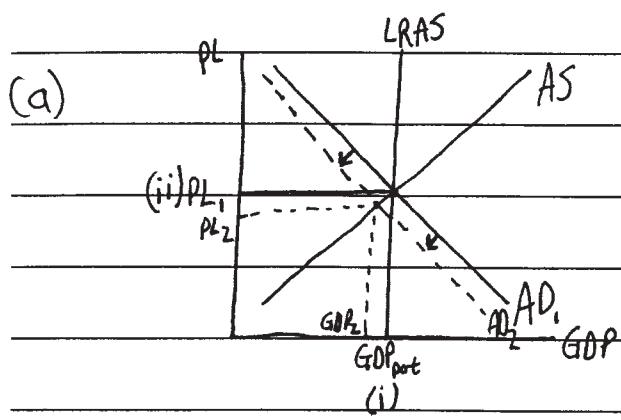
Copyright © 2005 by College Board. All rights reserved. College Board, AP Central, APCD, Advanced Placement Program, AP, AP Vertical Teams, Pre-AP, SAT, and the acorn logo are registered trademarks of the College Entrance Examination Board. Admitted Class Evaluation Service, CollegeEd, Connect to college success, MyRoad, SAT Professional Development, SAT Readiness Program, and Setting the Cornerstones are trademarks owned by the College Entrance Examination Board. PSAT/NMSQT is a registered trademark of the College Entrance Examination Board and National Merit Scholarship Corporation. Other products and services may be trademarks of their respective owners. Permission to use copyrighted College Board materials may be requested online at: <http://www.collegeboard.com/inquiry/cbpermit.html>.

**Visit the College Board on the Web: [www.collegeboard.com](http://www.collegeboard.com).**  
**AP Central is the official online home for the AP Program and Pre-AP: [apcentral.collegeboard.com](http://apcentral.collegeboard.com).**

1A

Write in the box the number of the question you are answering on this page as it is designated in the examination.

1



(b) (i) The Japanese recession will cause a fall in Japanese AD. This will decrease demand for US exports. Because net Exports ( $X_n$ ) is a component of AD, back in America, American AD will shift left. When AD shifts left, PL falls and output falls.

(ii) See graph.

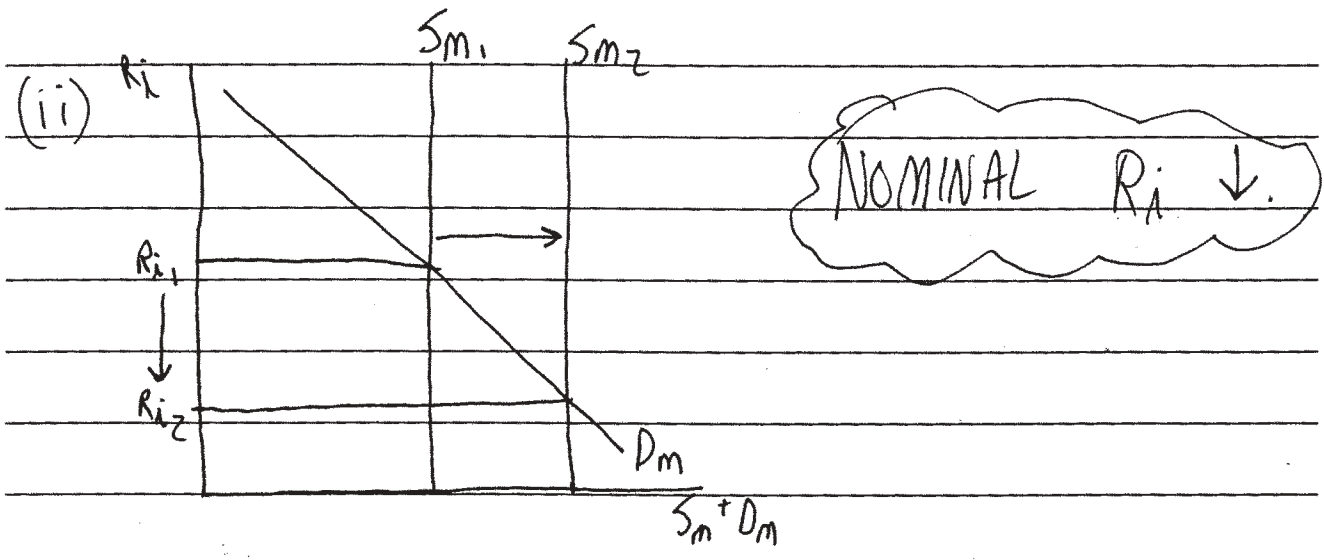
(c)(i) The Federal Reserve should buy bonds. When people sell their bonds to the Fed, the Fed deposits the money in banks. Therefore, the reserves of the bank increase. When the reserves increase, the amount of loanable funds increases and that means the supply of money increases.

CONTINUED ON BACK

1A

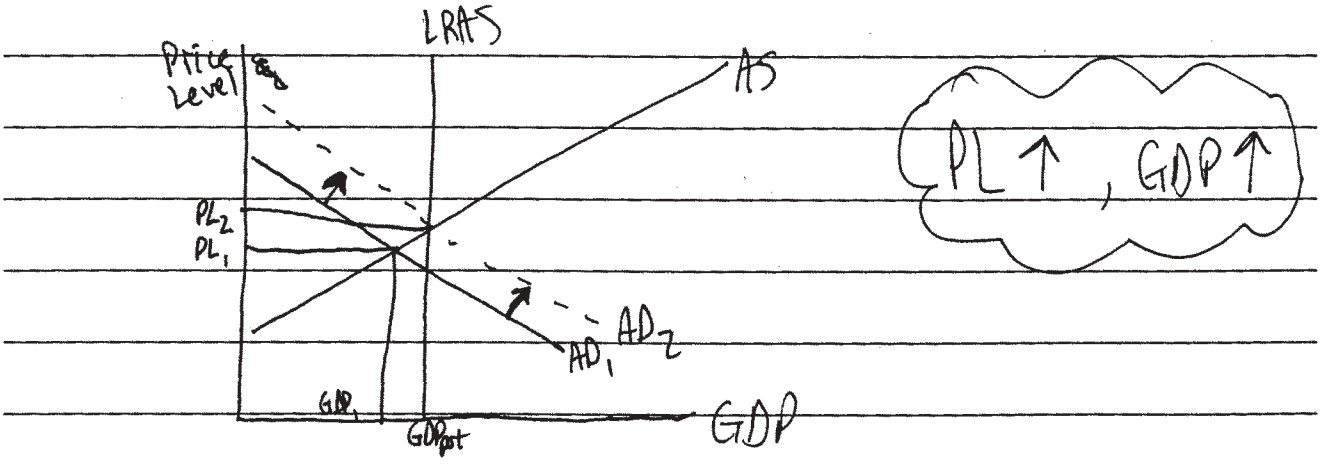
1

Write in the box the number of the question you are answering on this page as it is designated in the examination.



MONEY MARKET

(iii) Interest rate is the number 1 determinant of  $I_g$  (a component of AD). ~~More~~ Because they are inversely related, decreasing  $R_i$  will increase  $I_g$  and thus increase AD. An increase in AD increases price level and output - see below.



Write in the box the number of the question you are answering on this page as it is designated in the examination.

(d) Real interest rate is defined as the nominal interest rate minus inflation:

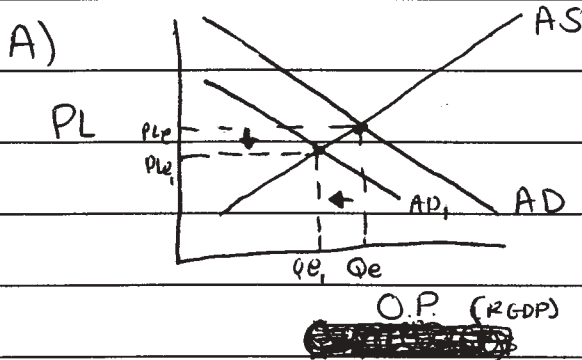
$$\text{Real } R_i = \text{Nominal } R_i - \text{Inflation.}$$

(e) The real interest rate will increase, but by less than the nominal interest rate because there will be inflation. Increasing AD causes demand-pull inflation because there is too much money chasing too few goods so prices increase.

B

Write in the box the number of the question you are answering on this page as it is designated in the examination.

1
---



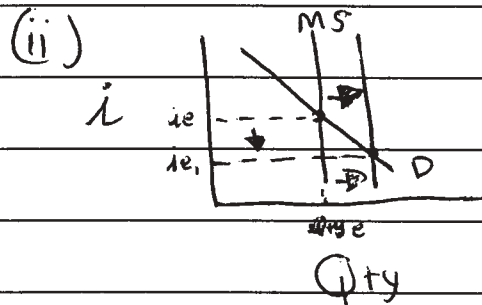
B)

(i) The recession leads to a halt on the imports of US goods. This changes or shifts the aggregate demand curve to the left, respectively lowering the price level and output

(ii) ↑ (part A)

C)

(i) The federal reserve would adopt an expansionary type operation, such as buying bonds. Such action increases money supply and thereby raises the <sup>aggregate</sup> demand ~~curve~~ curve, shifting it rightward.



Write in the box the number of the question you are answering on this page as it is designated in the examination.

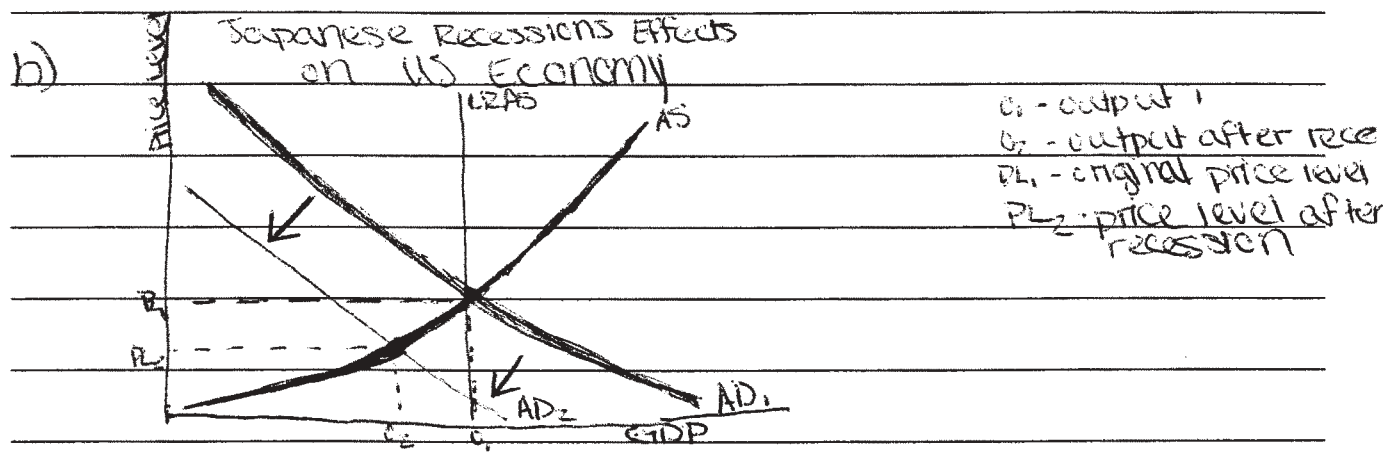
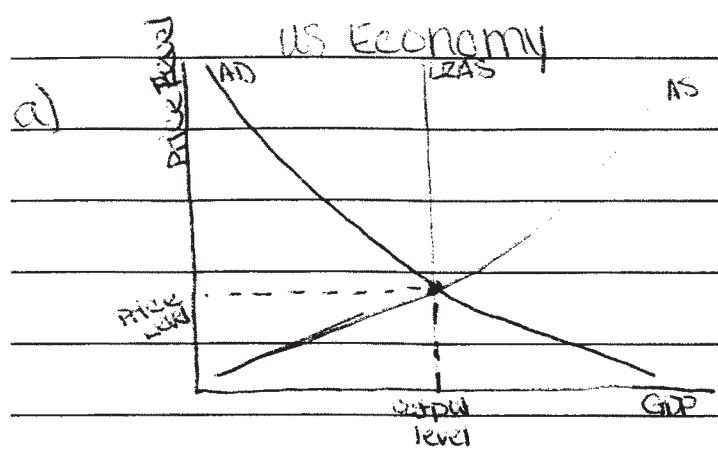
(iii) The change in interest rates, the fact that increased money supply lowered interest rates, will increase the demand, shifting aggregate demand curve to the right, effectively raising price level and output back to normal equilibrium values.

D) The real interest rate is the rate charged for borrowing money, which generally includes cost of inconvenience ~~of~~ of the loaners.

e) Eventually as the demand increases the ~~nominal~~<sup>real</sup> interest rate will too.

Write in the box the number of the question you are answering on this page as it is designated in the examination.

1

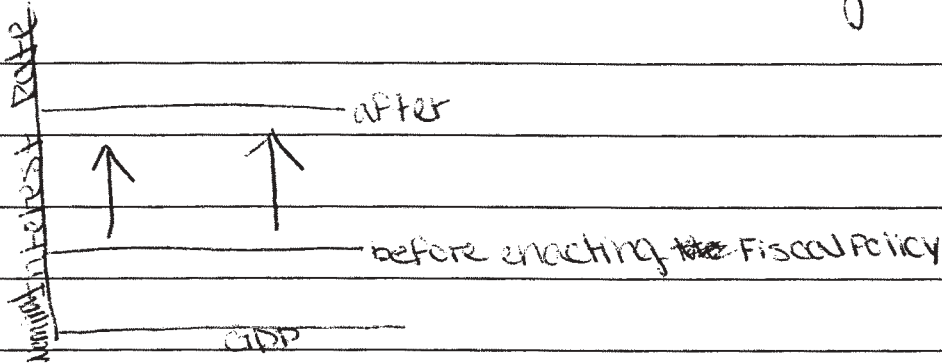


A Japanese recession will cause a large decrease in the amount of ~~ex~~ goods exported by the United States, causing a decrease in aggregate demand. The US economy will not be able to operate at full employment like it was before. The price level and output in the US decrease with the change in demand.

c) In attempts to fix the impact the Japanese recession had on the

Write in the box the number of the question you are answering on this page as it is designated in the examination.

US economy, the Federal Reserve will increase government spending. Borrowing money in order to increase demand will cause price level and output to increase toward their original equilibrium.



d) The real interest rate is the amount of money owed on ~~some~~ borrowed money. Unlike nominal interest rate, real interest rate ~~is~~ considers inflation when calculating the interest rate.

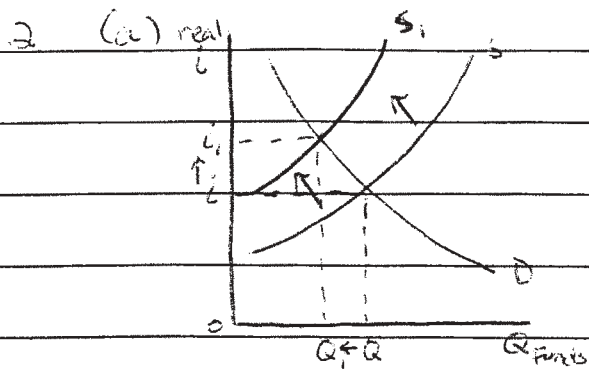
e) The real interest rate will rise because money is being borrowed. The more money that is in the market, the more inflation, so the real interest rate will be even higher than the nominal interest rate.



2A

Write in the box the number of the question you are answering on this page as it is designated in the examination.

2



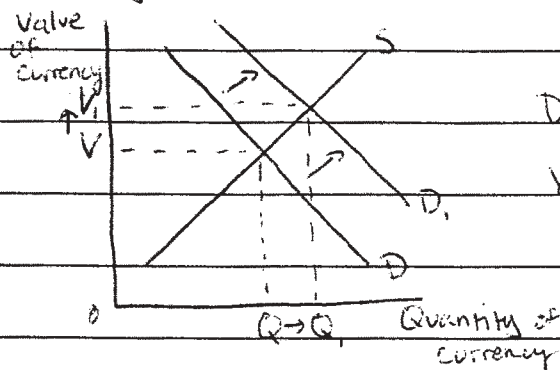
The increase in deficit spending increases the real interest rate because the supply of funds is diminished by the government. (Crowding out effect).

(b) The quantity demanded of Funds ~~the~~ <sup>(Investment)</sup> decreases.

$$S_{funds} \downarrow \rightarrow \uparrow i \rightarrow \downarrow Q_{demanded} \Rightarrow \downarrow \text{Investment}$$

(c) Since investment decreases, ~~the~~ <sup>future</sup> growth is limited because there is less capital stock. Long term economic growth will therefore decrease.

(d) (i) Since the real interest rate increases, more countries will want to invest; there will be capital inflow so the demand for the country's currency will increase and the currency will appreciate.

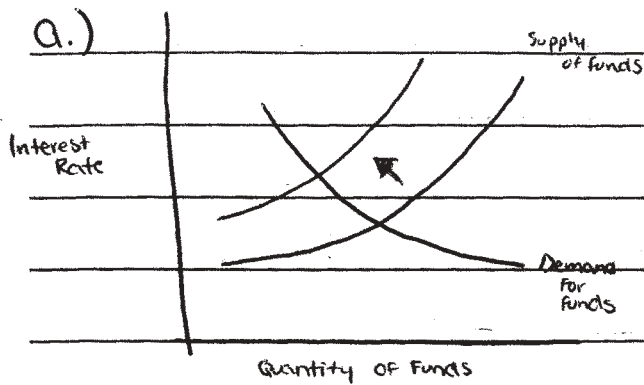


Demand ↑  
Value ↑

2B

## Question 2

Write in the box the number of the question you are answering on this page as it is designated in the examination.



An increase in deficit spending would decrease the ~~quantity~~<sup>supply</sup> for funds in the commercial banking system which would increase interest rates.

b.) An increase in the real interest rate will decrease business investment into new plants and machinery and this is called the "crowding out effect."

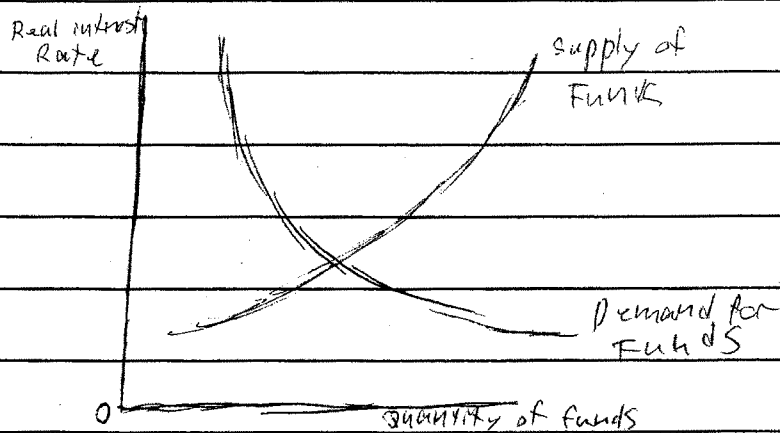
c.) The increase in interest rates will slow long term growth by not allowing businesses to grow as rapidly as they could have; however, only a large change in interest rates will cause a large change in long run growth.

d.) The increase in interest rates will increase demand for money and increase the international value of the dollar. Exports will fall, imports will rise, and the country will incur a trade deficit.

Write in the box the number of the question you are answering on this page as it is designated in the examination.

20

Question 2-



A- As Deficit spending increases so will the <sup>real</sup> interest rate

B- As the interest rate increases, then less people will invest in new machinery, instead they will make repairs to the old machinery.

C- Changes made in the real interest rate then make higher prices in the long-term market costs.

D- (i)- If the interest rate increases then less countries will desire the country's currency. Demand will decrease and so will supply.

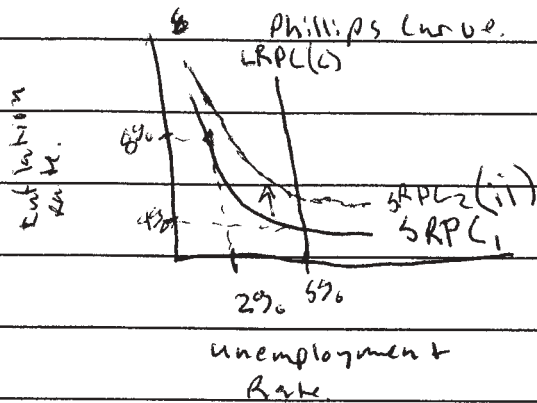
(ii)- As this demand goes down so will the value of the currency. It becomes less desirable and worth less.

3A

Write in the box the number of the question you are answering on this page as it is designated in the examination.

3

3. (a)



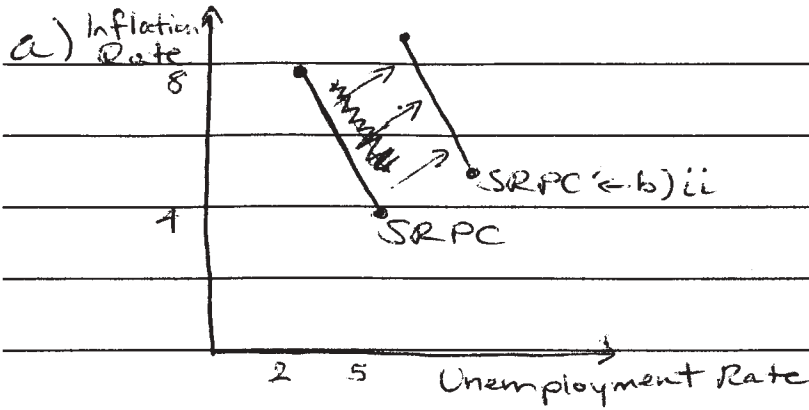
(b)(i) Decrease in worker productivity would cause a leftward shift in Aggregate Supply.

(d) In the long run the unemployment Rate ~~does~~ does not have a relationship with the Inflation Rate. This is because in the long run the unemployment Rate will stay close to the natural rate of unemployment no matter what the inflation Rate.

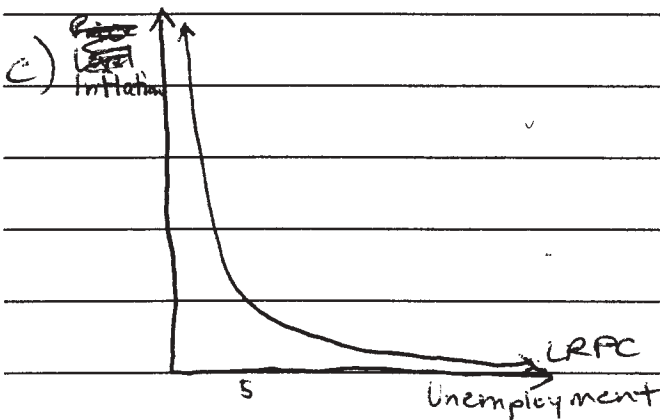
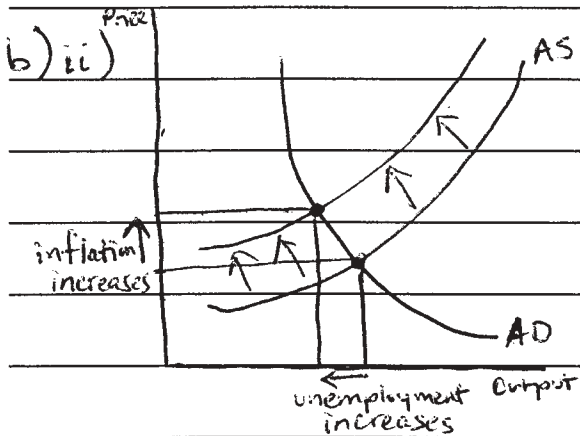
3B

Write in the box the number of the question you are answering on this page as it is designated in the examination.

III



b) i) A shift to the left of the aggregate supply curve could be caused by a depletion in the <sup>total</sup> amount of available resources — land, capital, labor, or entrepreneurial ability.



III

Write in the box the number of the question you are answering on this page as it is designated in the examination.

d) In the long run, there is an inverse relationship between inflation and unemployment. As one increases, the other decreases, and vice versa.

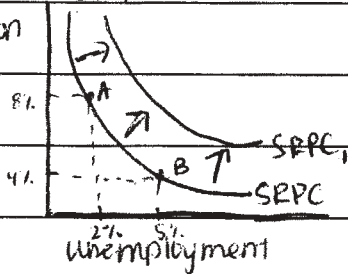
30

Write in the box the number of the question you are answering on this page as it is designated in the examination.

3

a)

inflation



A = last year's unemployment and inflation rate

B = this year's unemployment and inflation rate

(b)

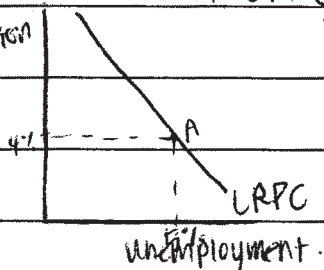
(i) one factor that could cause the aggregate supply curve to shift to the left is an increase in unemployment and/or inflation.

(ii) leftward shift of the aggregate supply curve will shift the ~~the~~ short-run Phillips curve

right. Shown on graph SRPC to SRPC<sub>1</sub>

(c)

inflation



A = natural rate of unemployment in country X as 5%

(d) The relationship between the unemployment rate and the inflation rate in the long run is inverse.

As unemployment increases, inflation decreases and as unemployment decreases, inflation increases and vice versa if inflation increased/decreased first.