Question 1

12 Points \((3 + 3 + 2 + 3 +1)\)

(a) 3 points:
- One point is earned for a correctly labeled graph of the money market.
- One point is earned for showing a rightward shift of the money demand curve.
- One point is earned for the conclusion that the interest rate rises.

(b) 3 points:
- One point is earned for a correctly labeled graph of the foreign exchange market.
- One point is earned for showing an upward shift of the demand curve for the dollar.
- One point is earned for concluding that the yen price of the dollar increases.
(c) 2 points:
- One point is earned for concluding that net exports will fall.
- One point is earned for stating that the appreciating dollar makes U.S. goods relatively more expensive to Japan, so U.S. exports to Japan would fall and imports rise.

(d) 3 points:
- One point is earned for a correctly labeled graph of AS/AD.
- One point is earned for showing a leftward shift of the AD curve.
- One point is earned for concluding that output and the price level both fall.

(e) 1 point:
- One point is earned for stating that unemployment rises because output is falling.
Write in the box the number of the question you are answering on this page as it is designated in the exam.

a) **Money Market**

<table>
<thead>
<tr>
<th>Nominal Interest Rate</th>
<th>( M_0 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( P_1 ) ↑</td>
<td>( P_2 ) ( M_0 )</td>
</tr>
</tbody>
</table>

\( M_s \), Qty of Money

(i) \( M_0 \) = Demand for money goes up (shifts to the right)

(ii) Nominal interest rate goes up from \( P_1 \) to \( P_2 \) (gets higher)

b) **Foreign Exchange Market**

<table>
<thead>
<tr>
<th>Exchange Rate (Dollar)</th>
<th>( S )</th>
</tr>
</thead>
<tbody>
<tr>
<td>( P_1 ) ↑</td>
<td>( P_2 )</td>
</tr>
</tbody>
</table>

\( Q_1 \), Qty of Dollars

(i) Demand for the dollar increases (shifts to the right)

(ii) Price of the dollar increases (goes up from \( P_1 \) to \( P_2 \))

c) The higher price of the dollar will make US goods more expensive relative to foreign goods. Thus, imports will rise and exports will fall (other countries will now have to pay more for US goods and will import less of them, causing this fall in exports for the US). From the US perspective, foreign goods will now be cheaper to import with the dollar's increase in value, thus the increase in imports. Overall, net exports will fall. The US will experience a balance of payments problem because \( X-I \) will be overtaken by a rush of imports and a fall of exports. This might result in an economic recession.
d) AD/AS

- Price level
- SRAS

- β
- AS
- AD
- Q
- L/AS
- Real GDP

(i) Aggregate demand will shift to the left because of the lower Net exports value/balance.

(ii) Output will fall and price level will fall.

e) Unemployment will rise in the short run because the smaller output (real GDP) produced after the fall in AD will induce companies to lay off employees not needed to maintain the new lower short run production level in the economy.
Write in the box the number of the question you are answering on this page as it is designated in the exam.

1

a) Interest Rate

[Diagram]

# Demand (b)

i) Interest rate increases Demand ↑

ii) Interest Rate ↑

b)

[Diagram]

Price (yen) $ \quad \text{in dollars($)}

i) E: Demand for dollar ↑ because US goods more affordable

ii) Price of dollar decreases

c) Exports of United States will increase because US goods are now more affordable in the foreign market. US goods are less expensive.
Write in the box the number of the question you are answering on this page as it is designated in the exam.

1

a)

\[ \text{Agg Demand} \]

\[ \text{Agg Supply} \]

\[ \text{Price Level} \uparrow \text{because dollar valued} \]

\[ \text{Agg Demand} \uparrow \text{because exports} \uparrow \]

ii) \[ \text{Output} \uparrow, \text{Price Level} \uparrow \]

e) \[ \text{Unemployment in or will decrease because demand is higher so more products must be produced.} \]
Write in the box the number of the question you are answering on this page as it is designated in the exam.

4.)

The demand for money will increase because people have lost faith in the financial system and want their money now. The nominal interest rate will rise.

b.

The demand for dollars (U.S.) will fall. The price of the dollar will fall.

Price of dollar

C. The net exports of the U.S. would most likely increase because the U.S. goods have become cheaper for Japanese consumers.
Write in the box the number of the question you are answering on this page as it is designated in the exam. 1 2

a.) Aggregate demand will decrease thus causing the price level and output to decrease as well.

b.) Unemployment will increase since there is less demand for the products being produced.

c.) (cont.) would decrease since more money is being put into the bank instead of the citrus market.

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Overview

Question 1 evaluated students’ understanding in three major areas of aggregate economic analysis: monetary equilibrium, the foreign exchange market, and aggregate supply and demand. Part (a) asked students to draw a graph showing the effect of increased money holdings resulting from sales of stocks on money demand and the nominal interest rate. Part (b) required them to illustrate, using a graph, the effect of lower prices for U.S. goods on the demand for the dollar and the price of the dollar on the foreign exchange market. Parts (c) and (d) directed students to use the change in the price of the dollar from part (b) to explain the effect on net exports of the United States and to sketch a graph to demonstrate how the change in net exports affects aggregate demand and the equilibrium price level and output in the short run. Part (e) asked them to explain the effect of the conclusions in part (d) on unemployment in the short run.

Sample: 1A
Score: 12

The student earned all points in this question.

Sample: 1B
Score: 6

The student earned 2 points in part (c). The first point was earned for concluding that exports would increase after asserting in part (b) that the value of the dollar decreases. The second point was earned for correctly explaining that an increase in net exports is due to a decline in the relative price of U.S. goods. The student earned 3 points in part (d). The first point was earned for a correctly labeled graph. The second point was earned for increasing aggregate demand after concluding in part (c) that exports were increasing. The third point was earned for showing that the increase in aggregate demand leads to an increase in the price level and the quantity of output. The student earned 1 point in part (e) for correctly concluding that unemployment would decrease because output increases.

Sample: 1C
Score: 3

The student earned 2 points in part (d). The first point was earned for a correctly labeled graph. The second point was earned for correctly concluding that a decrease in aggregate demand would result in a decline in the price level and output. The student earned 1 point in part (e) for correctly concluding that unemployment would increase.
Write in the box the number of the question you are answering on this page as it is designated in the exam.

1A

a) Money Market

Nominal Interest Rate

\[ \begin{align*}
\uparrow P_2 & \quad \rightarrow m_2 \\
\uparrow P_1 & \quad \rightarrow M_0, \\
M_S & \quad \text{Qty of Money}
\end{align*} \]

(i) \( M_0 \) = Demand for money goes up (shifts to the right)

(ii) Nominal interest rate goes up from \( P_1 \) to \( P_2 \) (gets higher)

b) Foreign Exchange Market

\[ \begin{align*}
\text{Yen/Dollar} & \quad \uparrow \rightarrow S \\
\uparrow P_2 & \quad \rightarrow 0 \quad D_1 \\
\uparrow P_1 & \quad \rightarrow Q_1 \quad Q_2 \quad \text{Qty of Dollars}
\end{align*} \]

(i) Demand for the dollar increases (shifts to the right)

(ii) Price of the dollar increases (goes up from \( P_1 \) to \( P_2 \))

c) The higher price of the dollar will make US goods more expensive relative to foreign goods. Thus, imports will rise and exports will fall (other countries will now have to pay more for US goods and will import less of them, causing this fall in exports for the US). From the US perspective, foreign goods will now be cheaper to import with the dollar's increase in value, thus the increase in imports. Overall, net exports will fall, the US will experience a deficit because \( X-I \) will be overtaken by a rush of imports and a fall of exports. Therefore, equilibrium will be disturbed.
d) AD/AS

Price level | AS

↓ P,  ————> AD,  <— AS

Q, , LRAS Real GDP

(i) Aggregate demand will shift to the left because of the lower Net exports value/balance

(ii) Output will fall and price level will fall

e) Unemployment will rise in the short run because the smaller output (real GDP) produced after the fall in AD will induce companies to lay off employees not needed to maintain the new lower short run production level in the economy.
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1) Interest rate increases, demand ↑.
2) Interest rate ↑.

b) Demand for dollar ↑ because US goods more affordable.

C) Exports of United States will increase because US goods are now more affordable in the foreign market. US goods are less expensive.
Write in the box the number of the question you are answering on this page as it is designated in the exam.

1. \[ B_2 \]

1) \( \text{Price level} \uparrow \) because dollar valuation

\( \text{Agg Demand} \uparrow \) because exports \( \uparrow \)

2) \( \text{Output} \uparrow \), price level \( \uparrow \)

3) Unemployment in 1 or will decrease because demand is higher so more products must be produced.
Write in the box the number of the question you are answering on this page as it is designated in the exam.

9. 

a) 

Demand for money 

Nominal interest 

The demand for money will increase because people have lost faith in the financial system and want their money in cash. The nominal interest rate will decrease.

b) 

Foreign exchange market 

The demand for dollars (U.S.) will decrease. 

C. The net exports of the U.S. would most likely decrease because the U.S. goods have become cheaper for Japanese consumers.
a.) Aggregate demand will decrease, causing the price level and output to decrease as well.

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Sample: 1C
Score: 3

The student earned 2 points in part (d). The first point was earned for a correctly labeled graph. The second point was earned for correctly concluding that a decrease in aggregate demand would result in a decline in the price level and output. The student earned 1 point in part (e) for correctly concluding that unemployment would increase.