Checked by Yang Lu.

THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

ECON 3123 Final Exam (Answer Book)

Date: Dec 10, 2025

Time allowed: 120 minutes

Not to be taken away.

74 (+2)

Instructions:

- Answer ALL the questions. Write your answers on the answer book. Anything written on the question book will NOT be graded.
- Write your answer to all the questions within the provided area. **Anything outside the provided area will NOT be graded.**
- Make sure that all your handweritngs are legible. Anything that cannot be understood by the grader will not be graded.
- Please submit BOTH the question book and the answer book after the exam.

DO NOT OPEN UNTIL INSTRUCTED!

Name: Lai Chun Hoi

Student ID: 21168753

Seat Number: 46

You MUST sign the following HKUST Honor Code.

Otherwise, your exam will NOT be graded.

The HKUST Academic Honor Code

Honesty and integrity are central to
the academic work of HKUST.
Students of the University must observe and uphold
the highest standards of
academic integrity and honesty in all the work
they do throughout their program of study.

◆

As members of the University community,
students have the responsibility to help maintain
the academic reputation of HKUST
in its academic endeavors.

◆

Sanctions will be imposed on students,
if they are found to have violated the regulations
governing academic integrity and honesty.

Your Signature: 

Multiple Choice Questions (20 points)

1	2	3	4	5
C	A	D	~~E~~	~~E~~

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Question 6 (15 points)

(1) (5 points)

$\pi_t = 5\% + 0.4\pi_{t-1} - 0.5u_t$

$\pi_t - \pi_t^e = 5\% + 0.4\pi_{t-1} - 0.5u_t - 2.4\% - 0.4\pi_{t-1}$

$\pi_t - \pi_t^e = 2.6\% - 0.5u_t$

For natural unemployment rate, $\pi_t = \pi_t^e$

$0 = 2.6\% - 0.5u_n$

$u_n = 5.2\%$

Question 6 (15 points, Continued)

(2) (5 points)

$\pi_{t+1} = 5\% + 0.4\pi_t - 0.5u_{t+1}$

$= 5\% + 0.4 \cdot 5\% - 0.5 \cdot 5.2\%$

$= 4.4\%$

(3) (5 points)

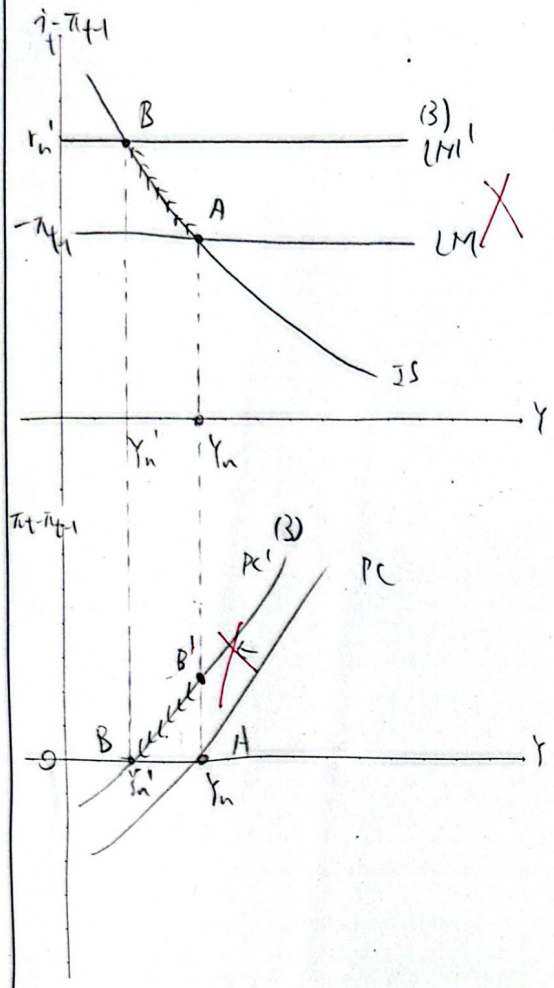
$\pi_{t+1} = 5\% + 0.4\pi_t - 0.5u_{t+1}$

$4\% = 5\% + 0.4 \cdot 5\% - 0.5u_{t+1}$

$u_{t+1} = 6\%$

Question 7 (35 points)

(1) (5 points) and (3) (10 points)



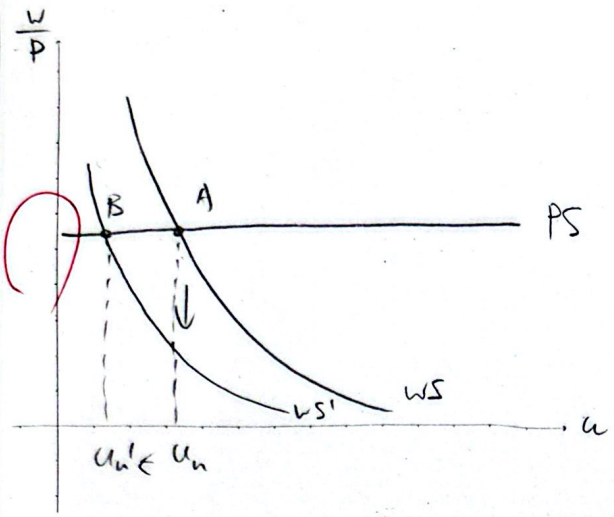
Effects: The drop of natural unemployment rate will lead to a drop of natural output level. The economy now is having an output higher than natural output level Y_n', therefor $\pi_t > \pi_{t-1}$. Central Bank will later discover the inflationary pressure (increase in inflation rate) and CB will decide to increase i gradually to adjust output to the new natural level gradually.

$W = P F(u, z)$

$\downarrow \frac{W}{P} = F(u, \downarrow z)$

Question 7 (35 points, Continued)

(2) (10 points)



Effects:

We capture the weakens of workes' bargaing power as a drop of z, which makes them has a lower nominal wage. By the WS and PS natural unemployment rate drop.

(4) (10 points) Circle the correct one and write one-sentence explanation.

Inflation (increases / decreases / remains unchanged / is uncertain).

Explanation: The process of central bank's adjustment is a gradual process. We don't know the exact time of hitting natural output level. So as in time t+2, we don't know whether the output is in natural level, so we don't know what will be the change of that certain period.

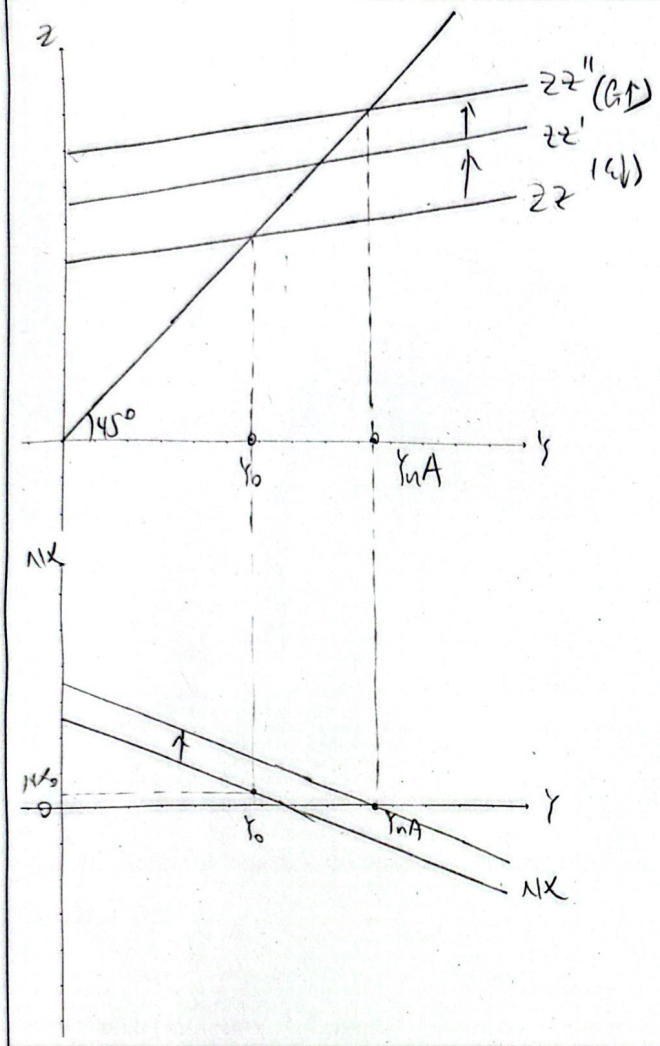
Output (increases / decreases / remains unchanged / is uncertain).

Explanation:

without government's fiscal expansion, when i ↑, Y ↓. It is also the purpose of central Bank, so Y will drop.

Question 8 (30 points)

(1) (5 points) and (2) (10 points)



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Policy mix:

ε should drop

Government should increase government spending

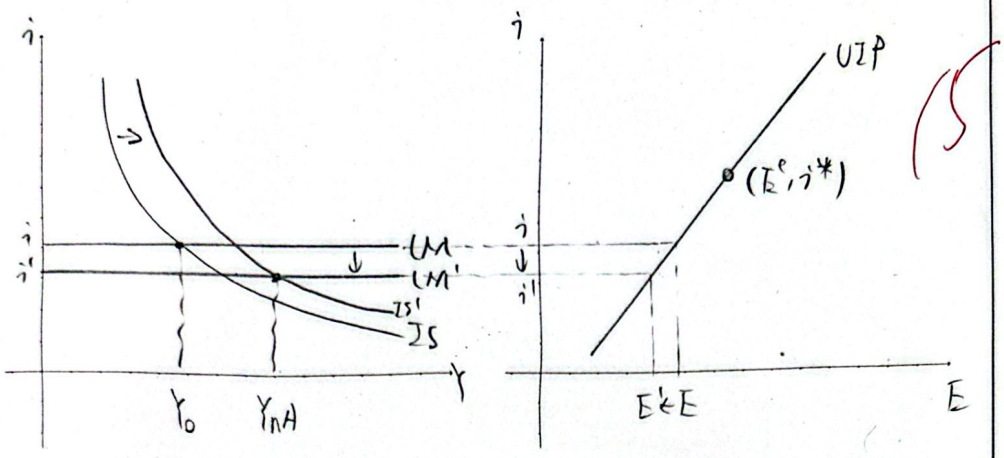
Explanation:

ε↓, by Marshall-Lerner condition, ΔNX↑.

The economy is still in trade surplus now, we need to increase G, causing Y↑, IM↑ adjust it back to trade balance.

Question 8 (30 points, Continued)

(3) (15 points) Circle the correct one and write one-sentence explanation.



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Monetary policy:

i should be decreased by increasing money supply.

By $\xi = \frac{1+i}{1+i^*} E^e \frac{P}{P^*} = \frac{1+i}{1+i^*} E^e$, which is the UIP

when $i \downarrow$, $\xi \downarrow$

Consumption (increases / decreases / remains unchanged / is uncertain).

Explanation: $Y_{nA} > Y_0$, T unchayed

Investment (increases / decreases / remains unchanged / is uncertain).

Explanation: $Y_{nA} > Y_0$ and $i' < i$

Net export (increases / decreases / remains unchanged / is uncertain).

Explanation: From trade surplus to trade balance

********** END OF THE EXAM **********