Midterm Examination

Macroeconomics, 1062 Semester (Spring 2018)
College of Management, National Chiao Tung University
Instructor: Professor Alex YiHou Huang
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Instructions

- Please read the questions carefully and make sure you provide answers to all parts of questions.
- Raise your hand if you have any problem. Please do not talk to or exchange notes with other students.
- No bathroom breaks are allowed.
- Turn off your cell phone(s) and any other electronic device.

Part I. Multiple Choice (72%, 3 points each, choose one correct answer):

$EX > IM \quad NX > 0$

1. When exports exceed imports, *all* of the following are true *except*:
   D
   (A) net capital outflows are positive.
   (B) domestic saving exceeds domestic investment. $S > I$
   (C) net exports are positive.
   (D) government spending exceeds tax revenue. $G > T$
   (E) domestic output exceeds spending.

2. If the fraction of employed workers who lose their jobs each month (the rate of job separation) is 0.01 and the fraction of the unemployed who find a job each month is 0.09 (the rate of job findings), then the natural rate of unemployment is:
   D
   (A) 1 percent.
   (B) 5 percent
   (C) 9 percent.
   (D) 10 percent.
   (E) about 11 percent.

   $S = 0.01 \quad f = 0.09$

   $\frac{U}{L} = \frac{s}{s+f} =$

3. If the nominal exchange rate falls 10 percent, the domestic price level rises 4 percent, and the foreign price level rises 6 percent, the real exchange rate will fall:
   E
   (A) 0 percent.
   (B) 4 percent.
   (C) 8 percent.
   (D) 10 percent.
   (E) 12 percent.

   $-6+4-6$

   $r = i - \pi$

   $e \downarrow 10\% \quad P \uparrow 4\%$

   P^*

   $\varepsilon = \frac{eP}{P^*}$

$\varepsilon = e + P - P^*$

$= -10 + 4 - 6$

4. To reduce the money supply, the Central Bank:

B

(A) buys government bonds.
(B) sells government bonds.
(C) print more money.
(D) creates demand deposits.
(E) destroys demand deposits.

5. Sectoral shifts:

E

(A) lead to wage rigidity.
(B) encourage strong worker unions.
(C) explain the payment of efficiency wages.
(D) depend on the level of the minimum wage.
(E) make frictional employment inevitable.

6. In a small open economy, if exports equal $15 billion and imports equal $8 billion, then there is a trade ______ and ______ net capital outflow.

E

(A) deficit; negative
(B) surplus; negative
(C) balance; negative
(D) deficit; positive
(E) surplus; positive

7. The income velocity of money increases and the money demand parameter *k* ______ when people want to hold ______ money.

E

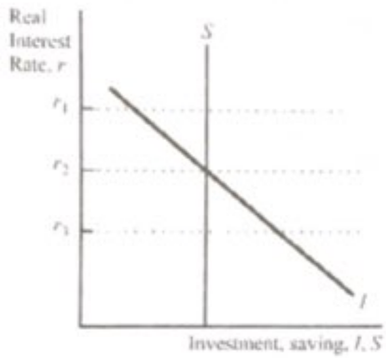
(A) increases; more
(B) increases; less
(C) increases; same amount of
(D) decreases; more
(E) decreases; less

$V \propto \frac{1}{k}$

8. *All* of the following policies were adopted by government in an attempt to reduce the natural rate of unemployment *except:*

B

(A) government employment agencies.
(B) unemployment insurance.
(C) public retraining programs.
(D) establishing a website to exchange information about jobs and candidates.
(E) the bonus program for unemployment insurance claimants who found jobs quickly.



9. Based on above graph, in a small open economy if the world interest rate is r_3, then the economy has:

C

(A) a trade surplus.
(B) balanced trade.
(C) a trade deficit.
(D) positive capital outflows.
(E) balanced budget.

$S < I$

A 5
B 6
C 5
D 3
E 4

10. In the long run according to the quantity theory of money and the classical macroeconomic theory, if velocity is constant, then ______ determines real GDP and ______ determines nominal GDP.

A

(A) the productive capability of the economy; the money supply
(B) the money supply; the productive capability of the economy
(C) velocity; the money supply
(D) demand of goods and services; velocity
(E) the money supply; velocity

(A) $\Rightarrow V = \frac{T}{M} = \frac{PY}{M}$

$MV = PY$

11. *All* of the following are causes of structural unemployment *except*:

C

(A) minimum-wage laws.
(B) the monopoly power of unions.
(C) unemployment insurance.
(D) efficiency wages.
(E) wage rigidity.

12. In the classical model with fixed income, a $\boxed{\text{reduction in the government budget deficit}}$ will lead to a:

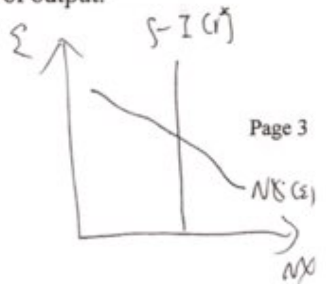
B

(A) higher real interest rate.
(B) higher level of net export.
(C) higher level of output.
(D) lower real interest rate.
(E) lower level of output.

G

$(T-G)\uparrow$

$S\uparrow$



13. In a small open economy, starting from a position of balanced trade, if the government increases the income tax, this produces a tendency toward a trade ______ and ______ net capital outflow.

B

~~(A)~~ deficit; negative

(B) surplus; positive

~~(C)~~ deficit; positive

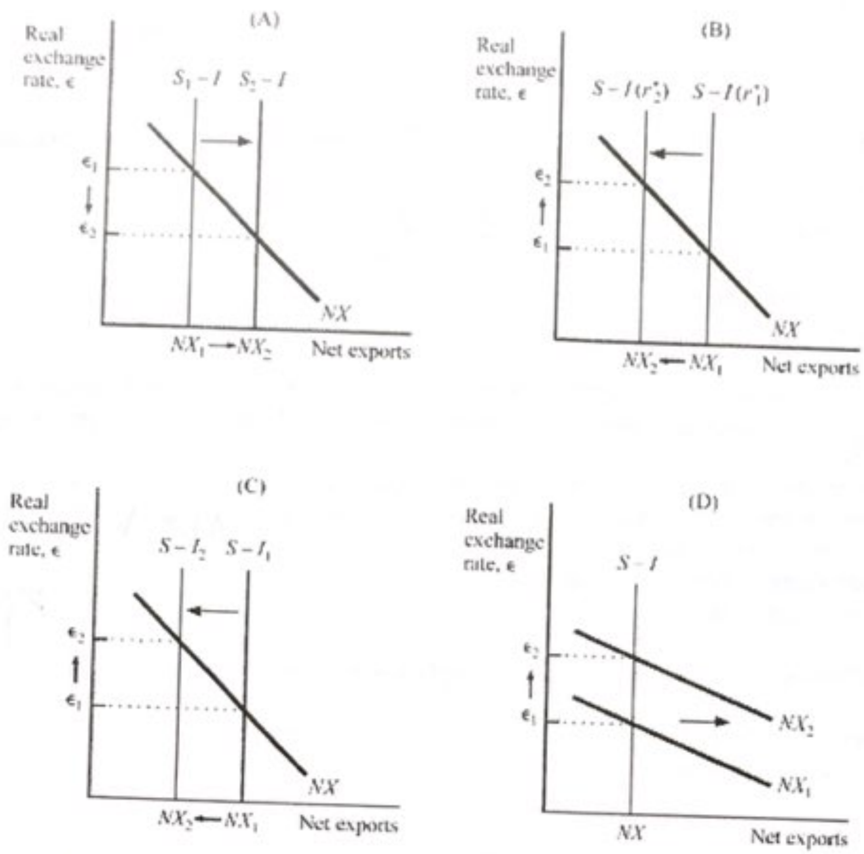
~~(D)~~ balanced; balanced

(E) surplus; negative

T↑ S↑

$S = Y - C(Y-T) - G.$

S↑.



14. Which of the above graphs illustrates the impact on the real exchange rate of protectionist trade policies?

D

~~(A)~~ (A)

(B) (B)

(C) (C)

(D) (D)

(E) None of above

1 NT = 1\$ → 0.5 NT = 1\$

15. If the real exchange rate depreciates from 1 Taiwanese good per U.S. good to 0.5 Taiwanese good per U.S. good, then U.S. exports ______ and U.S. imports ______.

B C

(A) increase; increase
(B) decrease; decrease
(C) do not change; increase
(D) increase; decrease
(E) decrease; increase

r ↓

16. Evidence from the past 40 years in the United States supports the Fisher effect and shows that when the inflation rate is high, the ______ interest rate tends to be ______.

A

(A) nominal; high
(B) nominal; low
(C) real; constant
(D) real; high
(E) real; low

$i = \Delta M = \pi$

17. In the case of unions, the conflict of interest between different groups of workers results in insiders wanting ______, while outsiders want ______.

B

(A) more hirings; high wages
(B) high wages; more hirings
(C) fewer hirings; low wages
(D) high wages; fewer hirings
(E) fewer hirings; high wages

18. In a small open economy, when foreign governments reduce national saving in their countries, the equilibrium real exchange rate:

A

(A) rises and net exports fall.
(B) rises and net exports rise.
(C) rises and net exports remain constant.
(D) falls and net exports fall.
(E) falls and net exports rise.

S ↓

19. According to the classical theory of money, inflation does not make workers poorer because wages increase:

C

(A) faster than the overall price level.
(B) more slowly than the overall price level.
(C) in proportion to the increase in the overall price level.
(D) in real terms during periods of inflation.
(E) when inflation is negative.

20. The recent reduced demand for unskilled workers relative to skilled workers has led to ______ for unskilled workers in Europe compared to ______ for unskilled workers in the United States.

A

(A) unemployment; lower wages
(B) lower wages; unemployment
~~(C)~~ more suicides; more unionization
~~(D)~~ more unionization; efficiency wages
~~(E)~~ efficiency wages; more unionization

21. Which of the following would decrease the real exchange rate in a small open economy in the long run?

C

(A) a personal income tax cut
(B) a high unemployment rate
(C) a reduction in government spending $\quad \varepsilon \downarrow$
~~(D)~~ a tariff on imports
~~(E)~~ an increase in investment

22. In the case of an unanticipated inflation:

A

(A) creditors with an unindexed contract are hurt because they get less than they expected in real terms.
~~(B)~~ creditors with an indexed contract gain because they get more than they contracted for in nominal terms.
~~(C)~~ no one gains or losses since inflation is not a real problem.
(D) debtors with an unindexed contract do not gain because they pay exactly what they contracted for in nominal terms.
~~(E)~~ debtors with an indexed contract are hurt because they pay more than they contracted for in nominal terms.

23. In a small open economy, if consumer confidence falls and consumers decide to save more, then the real exchange rate:

C

(A) rises and net exports fall.
(B) and net exports both rise.
(C) falls and net exports rise.
(D) and net exports both fall.
(E) remain constant and net exports fall.

Part II. Problems (31%, detail procedures must be provided):

1. (12 points) Suppose a government education program succeeds in getting households to save more. Using the long-run model of the economy developed in Chapter 3, graphically illustrate the impact of the higher saving rate by households. Be sure to label: (i) the axes; (ii) the curves; (iii) the initial equilibrium values; (iv) the direction curves shift; and (v) the terminal equilibrium values. In addition, state in words what happens to: (a) the real interest rate; (b) national saving; (c) investment; (d) consumption; and (e) output.

   Y-C-G↑
   C T-G

2. (9 points) Assume that in a small open economy with full employment, consumption depends only on disposable income. National saving is 300, investment is given by $I = 400 - 20r$, where r is the real interest rate in percent, and the ~~world interest rate is 10 percent.~~
   (A) If government spending rises by 100, does investment change? What is the level of investment after the change?
   (B) Does the trade balance change if G rises by 100? If it changes, does it increase or decrease, and by how much?
   (C) Will the real exchange rate rise, fall, or remain constant as a result of the change in G?

   Y-T-C G↑ → S↓
   T-G

3. (10 points) Suppose that the large industrial countries of the world are concerned about the depreciating currencies of a number of small open economies. Consequently, the large economies executd contractionary fiscal policy.
   (A) Illustrate graphically the impact of the industrial countries' policies on the exchange rate of the small open economies.
   (B) What will happen to the trade balance of the typical small open economy, assuming that it starts from a position of balanced trade?

Part I

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

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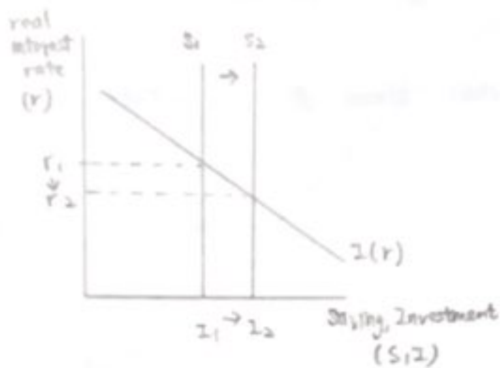
Part II

1.



$S = Y - C - G$

$= Y - C(Y-T) - G$

$= (1 - MPC)Y + MPC \times T - G$

Because the savings increased, so does the output. Since the output increases, according to the consumption function, $C(Y-T)$, the consumption also increases. As the savings increase, the real interest rate falls, the national saving rises, and the investment rises as well.

-4

2. (A) $S = 300 = Y - C - G$

$I = 400 - 20 \times 10 = 200$

If $\Delta G = 100$, $\Delta S = -100$

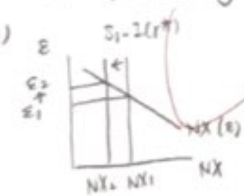
If government spending rises by 100, the investment won't change. It would still be 200.

(B) $NX = S - I$.

if $\Delta G = 100$, $\Delta S = -100$, $\Delta NX = -100$

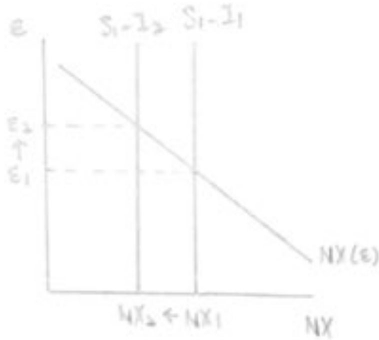
If G rises by 100, the trade balance decreases by 100.

(C)



The real exchange rate will rise as a result of the change in G.

3. (A)



Contractionary fiscal policy : $G\downarrow$ $T\uparrow$
So national saving ($S = Y - C - G$) of the foreign country rises, so the world interest rate falls.
As the interest rate falls, Investment rises.
As a result, the exchange rate of the small open economies rises.

(B)

$\Delta NX < 0$, it would cause a trade deficit.