

**Instructions:** Please fill in your name and student number on every page of the exam questionnaire and on the NCS sheet. Use the NCS sheet to answer the Multiple Choice questions. There are 40 questions in total (35 multiple choice and 5 short-answer questions). This exam has 11 pages—check that this copy has all of them. Good luck!

**Multiple-Choice Questions (70 points—2 points per question)**

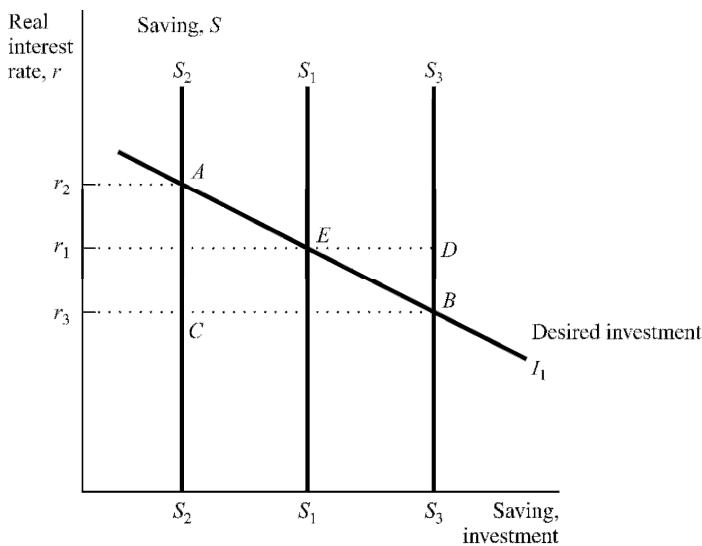
*Identify the letter of the choice that best completes the statement or answers the question.*

*(For Questions 1 to 11, assume a close economy)*

1. In the long run, what determines the level of total production of goods and services in an economy?
  - A) the interest rate and the amount of national saving
  - B) the quantity of capital, quantity of labour, and production technology
  - C) consumption, investment, and government spending
  - D) the marginal products of capital and labour, constant returns to scale, and competition
  
2. A competitive, profit-maximizing firm hires labour until the:
  - A) marginal product of labour equals the wage.
  - B) price of output multiplied by the marginal product of labour equals the wage.
  - C) real wage equals the real rental price of capital.
  - D) wage equals the rental price of capital.
  
3. According to the neoclassical theory of distribution, if firms are competitive and subject to constant returns to scale, total income in the economy is distributed:
  - A) only to the labour used in production.
  - B) partly between labour and capital used in production, with the surplus going to the owners of the firm as profits.
  - C) equally between the labour and capital used in production.
  - D) between the labour and capital used in production, according to their marginal productivities.
  
4. Since 1960, Canada's ratio of labour income to total income has:
  - A) been about 2.5 to 1.
  - B) been about 0.7.
  - C) increased steadily.
  - D) decreased steadily.
  
5. According to the neoclassical theory of distribution, in an economy described by a Cobb–Douglas production function, workers should experience high rates of real wage growth when:
  - A) real interest rates are high.
  - B) real interest rates are low.
  - C) average labour productivity is growing rapidly.
  - D) capital's share of income is growing rapidly.
  
6. Government transfer payments:
  - A) are included as part of government purchases,  $G$ .
  - B) can be viewed as negative tax payments,  $T$ .
  - C) are received as payment for inputs in the factor market.
  - D) do not affect the level of public or private saving.

7. Assume that equilibrium GDP ( $Y$ ) is 5,000. Consumption ( $C$ ) is given by the equation  $C = 500 + 0.6(Y - T)$ . Taxes ( $T$ ) are equal to 1,000. Government spending is 600. In this case, equilibrium investment is:  
 A) 600.  
 B) 1,100.  
 C) 1,500.  
 D) 2,200.
8. Crowding out occurs when an increase in government spending \_\_\_\_\_ the interest rate and investment \_\_\_\_\_.  
 A) increases; increases  
 B) increases; decreases  
 C) decreases; increases  
 D) decreases; decreases

**Figure 1**



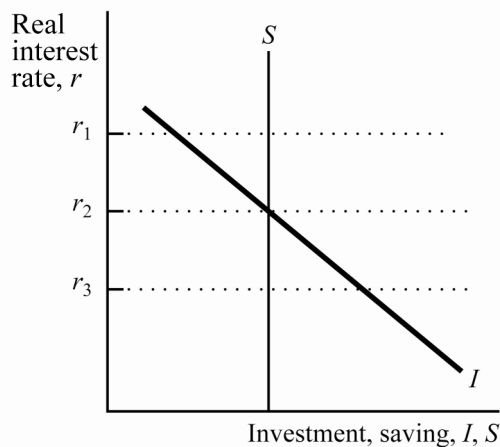
9. **Refer to Figure 1.** The economy begins in equilibrium at Point E, representing the real interest rate,  $r_1$ , at which saving,  $S_1$ , equals desired investment,  $I_1$ . What will be the new equilibrium combination of real interest rate, saving, and investment if the government raises taxes, holding other factors constant?  
 A) Point A  
 B) Point B  
 C) Point C  
 D) Point D
10. When government spending increases and taxes are increased by an equal amount, interest rates:  
 A) increase.  
 B) remain the same.  
 C) decrease.  
 D) can vary wildly.

11. If an earthquake destroys some of the capital stock, the neoclassical theory of distribution predicts:
  - A) the real wage will rise and the real rental price of capital will fall.
  - B) both the real wage and the real rental price of capital will fall.
  - C) both the real wage and the real rental price of capital will rise.
  - D) the real wage will fall and the real rental price of capital will rise.
  
12. To increase the money supply, the Bank of Canada:
  - A) buys government bonds or increases the bank rate.
  - B) sells government bonds or increases the bank rate.
  - C) buys government bonds or lowers the bank rate.
  - D) sells government bonds or lowers the bank rate.
  
13. Credit cards:
  - A) are part of the *M1* money supply.
  - B) are part of the *M2* money supply.
  - C) are part of both the *M1* and *M2* money supply.
  - D) may affect the demand for money.
  
14. If nominal wages cannot be cut, then one way to cut real wages is by:
  - A) inflation.
  - B) unions.
  - C) legislation.
  - D) productivity increases.
  
15. In Canada, the money supply is determined:
  - A) only by the Bank of Canada.
  - B) only by the behavior of individuals who hold money and of banks in which money is held.
  - C) jointly by the Bank of Canada and by the behavior of individuals who hold money and of banks in which money is held.
  - D) according to a constant-growth-rate rule.
  
16. In the country of Apoplexia, the velocity of money is constant. Real GDP grows by 3 percent per year, the money stock grows by 5 percent per year and the nominal interest rate is 6 percent. What is the real interest rate?
  - A) 2 percent.
  - B) 4 percent.
  - C) 6 percent.
  - D) 8 percent.
  
17. If consumption depends positively on the level of real balances and real balances depend negatively on the nominal interest rate in a neoclassical model, then the nominal interest rate:
  - A) declines when the money growth rate rises.
  - B) is unchanged when the money growth rate rises.
  - C) rises 1 percent for each 1 percent rise in the money growth rate.
  - D) rises less than 1 percent for each 1 percent rise in the money growth rate.

18. The concept of monetary neutrality in the classical model means that holding everything else constant, an increase in the money supply will increase:
- A) real GDP.
  - B) real interest rates.
  - C) nominal interest rates.
  - D) both saving and investment by the same amount.
19. Hyperinflations ultimately are the result of excessive growth rates of the money supply; the underlying motive for the excessive money growth rates is frequently a government's:
- A) desire to increase prices throughout the economy.
  - B) need to generate revenue to pay for spending.
  - C) responsibility to increase nominal interest rates by increasing expected inflation.
  - D) inability to conduct open-market operations.
20. According to the classical theory of money, reducing inflation will not make workers richer because firms will increase product prices \_\_\_\_\_ each year and give workers \_\_\_\_\_ raises.
- A) more; larger
  - B) more; smaller
  - C) less; larger
  - D) less; smaller
21. The opportunity cost of holding money is the:
- A) nominal interest rate.
  - B) real interest rate.
  - C) bank rate.
  - D) prevailing short-term bond rate.
22. When exports exceed imports, *all* of the following are true *except*:
- A) net capital outflows are positive.
  - B) net exports are positive.
  - C) domestic investment exceeds domestic saving.
  - D) domestic output exceeds domestic spending.
23. In a small open economy with perfect capital mobility, the real interest rate will always be:
- A) above the world real interest rate.
  - B) below the world real interest rate.
  - C) equal to the world real interest rate.
  - D) equal to the world nominal interest rate.
24. Starting from a small open economy with balanced trade, if large foreign countries increase their domestic government purchases, this policy will tend to increase:
- A) investment in the small open economy.
  - B) saving in the small open economy.
  - C) exports by the small open economy.
  - D) imports by the small open economy.

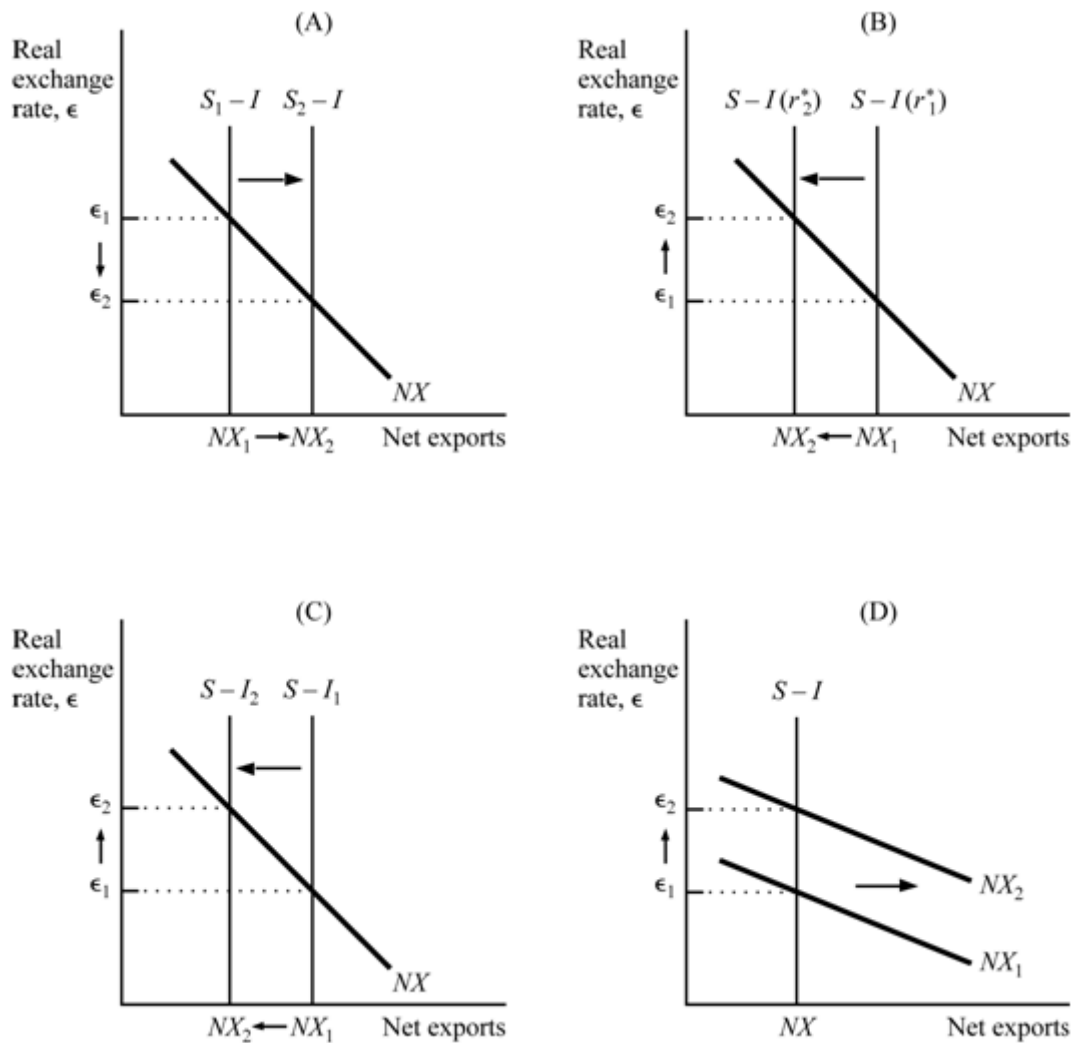
25. An increase in the trade deficit of a small open economy could be the result of:
- A) an increase in taxes.
  - B) an increase in government spending.
  - C) an increase in the world interest rate.
  - D) the expiration of an investment tax-credit provision.
26. In an open economy:
- A) a trade deficit is always good.
  - B) a trade deficit is always bad.
  - C) a trade deficit may be good or bad.
  - D) a trade surplus is always bad.

**Figure 2**



27. **Refer to Figure 2.** In a small open economy, if the world interest rate is  $r_1$ , then the economy has:
- A) a trade surplus.
  - B) balanced trade.
  - C) a trade deficit.
  - D) negative capital outflows.
28. If the government of a small open economy wishes to reduce a trade deficit, which policy action will be successful in achieving this goal?
- A) increasing taxes
  - B) increasing government spending
  - C) increasing investment tax credits
  - D) imposing protectionist trade policies such as import quotas
29. If the real exchange rate is high, foreign goods:
- A) and domestic goods are both relatively expensive.
  - B) and domestic goods are both relatively cheap.
  - C) are relatively expensive and domestic goods are relatively cheap.
  - D) are relatively cheap and domestic goods are relatively expensive.

Figure 3



30. Refer to Figure 3. Which of the panels illustrates the impact on the real exchange rate of contractionary fiscal policies abroad?
- A) (A)  
 B) (B)  
 C) (C)  
 D) (D)
31. If the real exchange rate between Canada and Japan remains unchanged, and the inflation rate in the Canada is 6 percent and the inflation rate in Japan is 3 percent, the:
- A) dollar will appreciate by 3 percent against the yen.  
 B) yen will appreciate by 3 percent against the dollar.  
 C) yen will appreciate by 6 percent against the dollar.  
 D) yen will appreciate by 9 percent against the dollar.

32. 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:
- A) 0 percent.
  - B) 8 percent.
  - C) 10 percent.
  - D) 12 percent.
33. If purchasing-power parity holds, then changes in domestic saving will \_\_\_\_\_ the real exchange rate.
- A) increase
  - B) decrease
  - C) not change
  - D) either increase or decrease
34. If purchasing-power parity held, if a Big Mac costs \$2 in the United States, and if 10 Mexican pesos trade for \$1 dollar, then a Big Mac in Cancun, Mexico, should cost:
- A) 2 pesos.
  - B) 5 pesos.
  - C) 10 pesos.
  - D) 20 pesos.
35. In a small open economy, if the introduction of automatic-teller machines reduces the demand for money, then net exports:
- A) fall and the real exchange rate falls.
  - B) fall but the real exchange rate remains unchanged.
  - C) remain unchanged but the real exchange rate falls.
  - D) and the real exchange rate remain unchanged.

**Short-Answer Questions (35 points)**

*Answer in the space provided*

36. (4 points) A classical economist wears a T-shirt printed with the slogan “Fast Money Raises My Interest!” Use the quantity theory of money and the Fisher equation to explain the slogan.



38. **(8 points)** In a close economy with flexible prices, competitive factor markets and fixed supplies of the factors of production, what is the impact of a change in immigration policy in a country that permits a huge influx of foreign workers into the labour market, *ceteris paribus*. Be sure to show how the equilibrium values of output, labour, the real wage, saving, investment, and the real interest rate change. Use graphs when appropriate.

39. **(8 points)** Using graphs, compare the impact of an increase in government spending in a small open economy and a close economy on saving, interest rate and investment. Assume prices are flexible and there is perfect capital mobility in the small open economy. Assume the small economy's net exports are balanced to start with.

40. (15 points) Consider a production function for an economy:

$$Y = L^{0.8}K^{0.2}$$

where  $L$  is labour and  $K$  is capital. In this economy the factors of production are in fixed supply with  $L = 100$  and  $K = 100$ . Suppose the government imposes a nominal minimum wage of one dollar. (Assume that in the absence of this law, nominal wages are fully flexible and that the price level equals one).

- a) What is the impact on employment?

- b) What is the impact on output?

- c) What is the impact on the total amount earned by workers?

- d) If the Central Bank's objective is full-employment. What do you think it should do? (You do not need to provide figures for this answer)

University of Ottawa **ECO2142 B**  
**Midterm # 1 (October 23, 2013)**

Name \_\_\_\_\_  
Student number \_\_\_\_\_