Name: ________________________________

You have 50 minutes to complete the 100 points worth exam. Make sure you show all your work so you can get partial credit. If you get stuck in a problem, make an assumption (reasonable), indicate it clearly, and continue with the problem. **Before beginning the exam, please verify that you have 6 pages with 21 questions in your exam booklet.** Good luck!

**Multiple Choice (each 3 points)**

1. Most economists believe that prices are:
   a. flexible in the long run but many are sticky in the short run.
   b. flexible in the short run but many are sticky in the long run.
   c. sticky in both the short and long runs.
   d. flexible in both the short and long runs.
   e. sticky in the short run but fixed in the long run

2. Based on the Keynesian model, one reason to support spending increases over tax cuts as measures to increase output is that:
   a. government spending increases the \( MPC \) more than tax cuts.
   b. government-spending increases do not lead to unplanned changes in inventories, but tax cuts do.
   c. increases in government spending increase planned spending, but tax cuts reduce planned spending.
   d. the government-spending multiplier is larger than the tax multiplier.
   e. government spending helps the poor while tax cuts help the rich.

3. Examination of recent data for many countries shows that countries with high saving rates generally have high levels of output per person because:
   a. high saving rates mean permanently higher growth rates of output.
   b. countries with high levels of output per worker can afford to save a lot.
   c. high saving rates lead to high population growth rates.
   d. high saving rates lead to less depreciation per worker.
   e. high saving rates lead to high levels of capital per worker.

4. The adoption of an investment tax credit in a small open economy is likely to lead to:
   a. no change in either domestic investment or domestic saving in the small open economy.
   b. an increase in both domestic investment and domestic saving in the small open economy.
   c. an increase in domestic investment but no change in domestic saving in the small open economy.
   d. an increase in domestic saving but no change in domestic investment in the small open economy.
   e. a decrease in both domestic investment and domestic saving in the small open economy.
5. In the Keynesian-cross model, fiscal policy has a multiplied effect on income because fiscal policy:
   a. increases the amount of money in the economy.
   b. changes income, which changes consumption, which further changes income.
   c. is government spending and, therefore, more powerful than private spending.
   d. changes the interest rate.
   e. can be in the form of either government spending or taxes.

6. Two reasons why capital may not flow to poor countries are that the poorer countries may:
   a. have economies unlike those described by a Cobb-Douglas production function and not be subject to diminishing returns to capital.
   b. have already accumulated high levels of capital relative to labor and may already have access to advanced technologies.
   c. have inferior production capabilities and not enforce property rights.
   d. legally prevent the inflow of foreign capital and provide strong legal protection of private property.
   e. have large pools of unskilled workers and have low rates of depreciation.

7. Which of the facts about the business cycles is incorrect?
   a. fluctuations in investment tend to be larger than fluctuations in consumption
   b. fluctuations in consumption tend to be smaller than fluctuations in GDP
   c. unemployment rises during recession and falls during expansions
   d. fluctuations in investment tend to be smaller than fluctuations in GDP
   e. changes in the rate of unemployment typically lag changes in GDP growth

8. Expansionary fiscal policy in a large open economy ______ the real interest rate and ______ the real exchange rate.
   a. increases; increases
   b. does not change; increases
   c. increases; decreases
   d. decreases; increases
   e. increases; does not change

9. Assume that a war reduces a country's capital stock but does not directly affect its labor force. Then the immediate impact will be that:
   a. output will rise, but output per worker will fall.
   b. both total output and output per worker will rise.
   c. total output will fall, but output per worker will rise.
   d. total output will fall, but output per worker will remain constant.
   e. both total output and output per worker will fall.

10. 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.
    e. a decrease in the population’s marginal propensity to consume.
11. According to classical theory, national income depends on ______, while Keynes proposed that ______ determined the level of national income.
   a. aggregate demand; aggregate supply
   b. monetary policy; fiscal policy
   c. aggregate supply; aggregate demand
   d. fiscal policy; monetary policy
   e. people’s expectations; firms’ production

12. Equilibrium levels of income and interest rates are ______ related in the goods and services market, and equilibrium levels of income and interest rates are ______ related in the market for real money balances.
   a. positively; positively
   b. negatively; positively
   c. positively; negatively
   d. negatively; negatively
   e. negatively; not

13. According to the Solow growth model, large populations:
   a. place great strains on an economy's productive resources, resulting in perpetual poverty.
   b. are a prerequisite for technological advance and higher living standards.
   c. are not a factor in determining living standards.
   d. require the capital stock to be spread thinly, thereby reducing living standards.
   e. require higher capital and output in order to compensate for depreciation.

14. The currencies of countries with high inflation rates relative to the United States have tended to ______, and the currencies of countries with low inflation rates relative to the United States have tended to ______ against the US dollar.
   a. depreciate; appreciate
   b. appreciate; appreciate
   c. appreciate; depreciate
   d. depreciate; depreciate
   e. not fluctuate; not fluctuate

15. In a small open economy, if exports equal $15 billion and imports equal $8 billion, then there is a trade ______ and a ______ net capital outflow.
   a. deficit; negative
   b. surplus; negative
   c. surplus; positive
   d. deficit; positive
   e. deficit; great
Short Answers

16. **Thriftiness** *(10 points)* Two countries, Thriftia and Spendia, are the same in every respect except that the rate of saving is higher in Thriftia than in Spendia. In which country will the standard of living be higher? **Illustrate graphically.**

The standard of living will be higher in ________________.

17. **Liquidity Preference** *(8 points)* Suppose the Federal Reserve decides to sell US Treasuries to the public. Use the liquidity preference model to show how this shifts the $LM$ curve. **Explain in words as well.**

18. **Leading Economic Indicators** *(6 points)* Explain what is the Index of Leading Economic Indicators. List **two** components of the LEI index.
19. **Policy and a small-open economy I (10 points)** In September 1995, Patrick Buchanan, a Republican candidate for president, proposed a 10 percent tariff on Japanese imports to the United States, a 20 percent tariff on Chinese imports to the United States, and an unspecified “social” tariff on imports from third-world countries.

   a. Use the long-run model of a small open economy to illustrate graphically the impact of these trade policies on the U.S. exchange rate and the trade balance. Be sure to label: i. the initial equilibrium values; ii. the direction the curves shift; and iii. the new long-run equilibrium values.

   b. Based on your graphical analysis, explain the predicted impact of Mr. Buchanan's proposed policies. Specifically state what happens to the exchange rate, the trade balance, the volume of imports, and the volume of exports.

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20. **Living Standards (9 points)** List and explain three policies that could lead to higher living standards. Be specific about what you would do to increase living standards in a country rather than simply saying that population growth should decrease.
21. **Exchange Rates** *(12 points)* Suppose that the large industrial countries of the world are concerned about the depreciating currencies of a number of small open economies.

a. What type of fiscal policies must the large industrial countries undertake in order to promote currency appreciation in small open economies?

b. Illustrate graphically the impact of the industrial countries' policies on the exchange rate of small open economies.

![Graph](image)  

\[ ε \]

(c) What will happen to the trade balance of the typical small open economy, assuming that it starts from a position of balanced trade?

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**Extra Credit**

If you have not missed more than one class since the beginning of the semester, you can answer the question below and earn 3 points extra credit.

22. Over the business cycle, changes in investment ______ changes in GDP.

a. are less volatile than  
b. are more volatile than  
c. have about the same volatility as  
d. can be either more or less volatile than  
e. are either less than or equal to, but not larger than
16. The standard of living will be higher in Thriftia ($Y_T > Y_S$).

17. If the Fed sells US Treasuries to the public, it reduces the money supply $M$. This shifts the supply of real money balances to the left ($M_1/P \rightarrow M_2/P$). This rises interest rates in the money market and for the same income ($Y$), interest rate is higher, which means that the LM curve shifts upward.
18. The Index of Leading Economic Indicators is an index that aims to forecast changes in economic activity 6-9 months into the future. It is published monthly by the Conference Board and is used in planning by businesses and government, despite not being a perfect predictor. The components of the LEI index are: average workweek in manufacturing, initial weekly claims for unemployment insurance, new orders for consumer goods and materials, new orders, nondefense capital goods, vendor performance, new building permits issued, index of stock prices, M2, yield spread (10-year - 3-month) on Treasuries, and index of consumer expectations.

19. a.
b. Under Mr. Buchanan's policy, the dollar exchange rate would appreciate but the trade balance would remain unchanged. However, the volume of imports will decrease (because of the tariffs) and the volume of exports will decrease by the same amount (because of the appreciation of the exchange rate).

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20. Policies that could lead to higher living standards could be:

- Policies affecting the saving rate: if saving is encouraged, say by providing tax incentives for people to put their savings into 401(k) accounts, the amount of capital per worker will increase over time, which will lead to higher output per worker and higher living standards.

- Encouraging foreign direct investment (FDI): if a country does not save enough domestically, foreign savings could lead to higher domestic investment (domestic investment is higher than domestic saving), which would increase the amount of capital per worker over time, and this will lead to higher output per worker and higher living standards.

- Increasing human capital: Investment in education increases workers' productivity, which means that $A$ in the Solow model increases. This leads to a higher level of output per worker even though capital per worker does not change. Consequently, living standards increase.

Other policies could include: improving infrastructure, encouraging research and development, building better institutions such as property rights, the rule of law, contract enforcement, etc, better allocation of capital, and many other.

21. 

a. The large economies must execute contractionary fiscal policy (decreasing government spending and/or increasing taxes) to generate a lower world interest rate.

b. The lower world interest rate increases investment in the small open economy, which reduces the supply of currency going into the foreign exchange market and increases the exchange rate of the small open economy.

c. The trade balance of the small open economy will move into deficit.

22. B