Practice Final Exam

CODE OF HONOR PLEDGE:

I will not give or receive aid on this examination. I understand that if I am aware of cheating on this exam, I have an obligation to inform Professor Brooks. I also understand that Professor Brooks will follow the University of Notre Dame Academic Code of Honor if he detects acts of academic dishonesty.

Signature: ________________________________

Printed Name: ________________________________

Date: ________________________________

Part I: Basic Concepts (8 of 200 points)

a) What is the difference between GDP and GNP?

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

b) What is the equity premium?

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____________________________________________________________________

____________________________________________________________________

c) What are the three tools the Federal Reserve can use to control the money supply?

1. ________________________________

2. ________________________________

3. ________________________________
Part II: Comparative Advantage (20 of 200 points)

Northland has 100 workers and Southland has 100 workers. Every worker in Northland can produce 6 tons of rice per year, or can produce 12 tons of corn per year. Every worker in Southland can produce 2 tons of rice per year, or can produce 10 tons of corn per year.

1) Which country has an absolute advantage in rice? ______________  
2) Which country has an absolute advantage in corn? ______________  
3) Which country has a comparative advantage in rice? ______________  
4) Which country has a comparative advantage in corn? ______________

Suppose initially the countries do not trade and Northland has 50 workers producing corn and 50 producing rice. Southland has 30 workers producing corn and 70 producing rice. Fill out the following table:

<table>
<thead>
<tr>
<th></th>
<th>Northland</th>
<th>Southland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn produced</td>
<td></td>
<td></td>
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<tr>
<td>Rice produced</td>
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Now the two countries trade with one another.

5) What good does Northland specialize in? ______________  
6) What good does Southland specialize in? ______________

If these countries have all workers produce the product that their country has a comparative advantage in, how much do they produce?

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7) How much more of each good is produced in total with specialization than when there was no trade? Corn: ___________  Rice: ___________
8) Now suppose Southland improves its technology to produce rice, and now each worker can produce 4 tons of rice per year. Are the gains from trade between Northland and Southland higher or lower than before? Why?
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

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Part III: International Capital Flows (12 of 200 points)

For each shock to the economy, use graphs to show how (i) interest rates, (ii) loanable funds, (iii) net capital outflows, (iv) net exports and (v) exchange rates are affected.

1) The domestic country raises tariffs charged on goods bought from abroad.

2) International investors perceive the domestic country to be a risky place to invest.
Part IV. Solow Growth Model (15 of 200 points)

Consider the simple version of the Solow Growth Model discussed in class summarized by these four equations:

- Consumers save a fraction $s$ of output: $I = s Y$
- Capital grows as follows: $K' = I + (1-\delta)K$
- Firms use capital to make output: $Y = A K^{0.3}$
- There is no government or trade: $Y = C + I$

where $Y$ is GDP, $I$ is investment, $C$ is consumption, $s$ is the savings rate, $K$ is the capital stock this year, $K'$ is the capital stock next year, $A$ is productivity and $\delta$ is the rate of depreciation.

a. Use these equations to give an equation for $K'$ that only depends on $K$, $A$, $s$ and $\delta$.

b. In the following space, draw a graph that illustrates the relationship between $K$, the capital stock this year, and $K'$, the capital stock next year:

\[ \text{45 degree line} \]

\[ \text{45 degree line} \]

c. Label the steady state level of capital $K^*$.  
d. Suppose that the initial level of capital $K_0$ is lower than $K^*$. Label a point lower than $K^*$ on the horizontal axis as $K_0$ and find the capital level the next year and label it $K_1$.  
e. Continuing from part d, show how to find the capital level the following year and label it $K_2$.  
f. Suppose that productivity $A$ goes up. Illustrate how the relationship between $K$ and $K'$ changes in the graph above. Label the new steady state capital level $K_{NEW}$.  
g. How does consumption change in the long run? ________________
Part V: Input Price Changes and the Sacrifice Ratio (25 of 200 points)

1) Suppose the economy is initially at the natural rate of unemployment and output. Illustrate this graphically using the AD-AS model and the Phillips Curve. Label all axes and lines, and label the initial equilibrium A.

2) Suppose the economy experiences a temporary increase in international oil prices. Illustrate the short run effect of this in the same graphs above using arrows to illustrate the shifting of curves, and label the new equilibrium B. What happened to: Prices ___ Output ___ Inflation ___ Unemployment ___

3) Continuing from above, in the same graphs illustrate what happens in the long run (again, labeling shifts in curves with arrows) and label the long run equilibrium C.

4) Redraw the graphs from parts 1 and 2 here, and illustrate what happens if instead the Fed intervenes to bring output back to its original level. Illustrate the equilibrium after Fed intervention D.

5) What are the costs and benefits of Fed intervention to adjust for fluctuating input prices? ___________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________
   ___________________________________________________________________

5
6) What is the *sacrifice ratio*? ________________________________________________  
_______________________________________________________________________
_______________________________________________________________________

7) Suppose that the Fed engages in the policy described by your answer to part 4,  
then decides that they would like to move from point D back to point A. Show how the Fed can get back to point A in the long run in the space below.  
- Suppose the economy starts at point D.  
- Next, find the short run equilibrium following the change in Fed policy,  
  and label that point E.  
- Then show how the economy adjusts in the long run to reach point A.  
  Indicate shifting curves using arrows.  

8) What are *rational expectations*? ____________________________________________  
_______________________________________________________________________
_______________________________________________________________________

9) If people have rational expectations, is the sacrifice ratio low or high? Why?  
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

10) How does the sacrifice ratio affect the position of point E in the figure above?  
    That is, compare where point E would be if the sacrifice ratio was high to where  
    it would be if the sacrifice ratio was low. __________________________________  
    _______________________________________________________________________
    _______________________________________________________________________
    _______________________________________________________________________
Part VI: Multiple Choice (120 of 200 points)

1) The sacrifice ratio is near zero if:
   a. People have rational expectations
   b. The AD curve is very flat
   c. The SRAS curve is very flat
   d. Both b & c

2) Suppose a country raises tariffs it charges on goods from the rest of the world. Taking into account the effect on exchange rates, what is the effect on net exports?
   a. Increases
   b. Decreases
   c. Depends on the relative sizes of the two countries
   d. None of these

3) With what country does the US have the largest bilateral trade deficit?
   a. Canada
   b. Mexico
   c. China
   d. Saudi Arabia

4) Suppose the Fed wanted to “disinflate”. They would implement this by:
   a. Buying a large number of government debt securities using open market operations
   b. Setting the inflation rate below zero
   c. Raising the federal funds rate target
   d. Reducing the government budget deficit

5) A currency union, such as the Euro, reduces the ability of member countries to respond to a recession because:
   a. When the currency area goes into recession, the currency union’s central bank can no longer use open market operations to stimulate aggregate demand
   b. Individual governments can no longer use fiscal policy to stimulate aggregate demand
   c. Crises may affect member states to differing magnitudes, making it difficult to tailor monetary policy to individual members
   d. Exchange rates with countries outside the currency union are more stable than when member states have independent monetary policy
6) Italy and France both produce high quality wine, yet both French and Italian consumers import the other country’s wine. This demonstrates:
   a. Classical gains from trade
   b. Gains from variety
   c. Pro-competitive effects from trade
   d. None of these

7) Which of these describes the “international allocation puzzle”?
   a. China specializes in high tech consumer electronics even though it is a middle income country
   b. China is lending to the US even though it is growing faster than the US
   c. Chinese stocks have much higher returns than US stocks even though China is poorer than the US
   d. China has lower interest rates than the US even though it maintains an exchange rate peg with the US dollar

8) Robinson and Friday are alone together on an island. Both can gather a gallon of fresh water in two hours. It takes Robinson 3 hours to catch a fish and it takes Friday 1 hour to catch a fish. Which of these statements is true?
   a. Robinson has a comparative advantage in collecting water
   b. Friday has a comparative advantage in collecting water
   c. Robinson has an absolute advantage in catching fish
   d. Both b & c

9) What was the cause the crisis in Greece?
   a. An unsustainable real estate bubble
   b. A banking sector that was too large relative to Greek GDP
   c. The Greek government revealed that the deficit was underreported
      a. Trade fell due to the US financial crisis

10) Sandy paid $10,000 for a car in 1990. CPI was 65 in 1990 and is 104 in 2015. That model of car bought new in 2015 costs $24,000. How much did Sandy pay for her car in 2015 dollars?
    a. $6,250
    b. $16,000
    c. $24,000
    d. None of these
11) A currency is said to “appreciate” when the nominal exchange rate goes:
   a. Up, meaning the domestic currency now buys more of the foreign currency
   b. Up, meaning the domestic currency now buys less of the foreign currency
   c. Down, meaning the domestic currency now buys more of the foreign currency
   d. Down, meaning the domestic currency now buys less of the foreign currency

12) How did the US resolve its debt crisis in the 1780s?
   a. Created the US Constitution, which federalized existing debts and gave the government the power to pay them off
   b. Allowed the states to go bankrupt to avoid setting a precedent that would encourage moral hazard
   c. Passed a law making default illegal, thus making it credible that they would repay their debts
   d. Instituted a single US currency so that investors would equate interest rates across US states

13) Which of these best describes the spreads on Greek government debt?
   a. They were high before the adoption of the Euro, then low before the crisis and high after the crisis
   b. They were low before adoption of the Euro, then high before the crisis and low after the crisis
   c. They were high from the early 1990s until the crisis, then low after
   d. They were low from the early 1990s until the crisis, then high after

14) An investment by foreign individuals in domestic firms in which the foreigner plays a role in the management of the firm is known as:
   a. Foreign Portfolio Investment
   b. Net Capital Outflow
   c. Foreign Direct Investment
   d. Balance of Payments

15) Suppose there are 100 one dollar bills in the economy. Half are in banks and half are in circulation in the economy. The reserve requirement is 10% and there are no excess reserves. What is the money supply?
   a. 50
   b. 100
   c. 500
   d. None of these
16) The US is said to be a relatively closed economy because:
   a. GDP has been growing faster than total trade for decades
   b. Total US exports are lower than many other countries
   c. The ratio of total trade to GDP is low compared to other countries
   d. The US has a large trade deficit

17) Quantitative easing is when the central bank:
   a. Begins purchasing long term bonds
   b. Reduces reserve requirements for banks
   c. Sets a target on medium and long term interest rates
   d. Both a & c

18) Suppose there are 2000 adults in the economy. They are divided up as follows: 200 are full time students, 200 work one part time job, 150 work two part time jobs, 400 work one full time job, 200 work one full time and one part time job, 400 are retired, 150 choose not to work, 50 have no job and last looked for a job 1 week ago, and 250 have no job and last looked for a job 2 weeks ago. Rounding to one decimal place:
   a. The unemployment rate is 5% and the labor force participation rate is 50%
   b. The unemployment rate is 20.7% and the labor force participation rate is 72.5%
   c. The unemployment rate is 4.2% and the labor force participation rate is 60%
   d. The unemployment rate is 24% and the labor force participation rate is 62.5%

19) Which of these was a key factor to help explain why the US economy fell into recession in 2007-09?
   a. An increase in inflation
   b. A fall in stock prices
   c. Increased protectionism
   d. An increase in mortgage defaults

20) Hyperinflation is usually caused by:
   a. A reduction in tax rates
   b. Nominal interest rates going below zero
   c. Funding budget deficits with money creation
   d. Steep drop in productivity

21) A currency is said to be “convertible” if it:
   a. Can be exchanged for a physical commodity
   b. Is easily traded on international currency markets
   c. Is widely used for market transactions
d. Can be deposited and withdrawn from banks

22) Billy is offered to flip of a fair coin where he wins $4 on heads and $0 on tails. The maximum Billy is willing to pay to take this gamble is $1.50. Billy is:
   a. Risk averse
   b. Risk neutral
   c. Risk loving
   d. Either a or b

23) The Austrian Theory of the Business Cycle implies that the Federal Reserve:
   a. Should raise interest rates during recessions
   b. Should lower interest rates during recessions
   c. Has no effect on the economy, except on inflation
   d. Has a negative effect on the economy

24) The “natural rate hypothesis” states that unemployment will deviate from its natural rate in the long run only if:
   a. The government maintains a budget deficit or surplus
   b. People have rational expectations
   c. Interest rates are at the zero lower bound
   d. None of these

25) Suppose there is a temporary decrease in government purchases. In the short run:
   a. The AD curve shifts to the left and Phillips curve shifts to the right
   b. The SRAS curve shifts to the left and Phillips curve shifts to the right
   c. The AD curve shifts to the left and the Phillips curve does not shift
   d. The SRAS curve shifts to the left and Phillips curve shifts to the left

26) Which of these is not a policy pursued by the South Korean government during its fast growth period?
   a. Renormalization of relations with Japan
   b. Stable interest rates
   c. Deregulation of business
   d. Stable inflation rates

27) Argentina’s trade policy during the 1940s and 1950s tried to increase growth by:
   a. Comparative advantage; focusing on exporting beef
   b. Gains from variety; focusing on importing and exporting manufactured goods
   c. Pro-competitive effects; promote innovation through international competition
   d. Import substitution; promote domestic industry by protectionism
28) The goal of the Great Leap Forward in China was to:
   a. Eliminate market forces from the Chinese economy
   b. Greatly increase grain and steel production
   c. Reverse failed socialist policies and reintroduce market reforms
   d. Oppress the rural population to improve the lives of the urban population

29) The growth of China is important because:
   a. No country has ever grown as fast as China
   b. No country as large as China has ever experienced such fast growth
   c. No country has ever sustained growth for as long as China
   d. No country besides the US, Canada, Australia and countries in Europe have ever experienced such fast growth

30) Membership in the Eurozone is a problem for Greece because:
   a. Greece uses the same currency as its creditors
   b. Greece uses the same currency as its major trade partners
   c. Monetary policy cannot be tailored to the Greek situation
   d. All of the above

31) Suppose real interest rates in a foreign country increase. This causes:
   a. Net capital outflows to rise and net exports to fall
   b. Net capital outflows to fall and net exports to rise
   c. Both net capital outflows and net exports to rise
   d. Both net capital outflows and net exports to fall

32) Comparative advantage is the ability to:
   a. Produce a good at the lowest total cost
   b. Produce a good with the fewest inputs
   c. Produce a good at the lowest opportunity cost
   d. Produce higher quality goods

33) My brother and I own our own houses. We decide to switch, so that I live in his house and he lives in my house. We pay each other the market rental price in our area: I pay him $2000 per month, and he pays me $1200 per month.
   a. GDP increases by $800 per month
   b. GDP increases by $3200 per month
   c. GDP does not change
   d. GDP decreases by $800 per month
34) Which of these is an example of foreign direct investment?
   a. A US company buys a factory owned by a foreign company in Indiana
   b. A foreign retiree buys one share of stock from a domestic broker
   c. A US company buys a factory owned by a Japanese company in Japan
   d. A domestic retiree buys one share of stock from a foreign broker

35) Central banks undertake quantitative easing programs to:
   a. Reduce inflation
   b. Boost the prices of publicly traded stocks
   c. More directly affect the interest rate relevant for investment decisions
   d. Both a & c

36) A US retailer that is considering buying from a supplier in Mexico that sells a product for 100 pesos. The retailer currently pays $5 for the product from a US supplier. The US supplier is cheaper than the Mexican supplier if and only if:
   a. One US dollar buys at least 500 pesos
   b. One US dollar buys at most 500 pesos
   c. One US dollar buys at least 20 pesos
   d. One US dollar buys at most 20 pesos

37) Both fiscal and monetary policy would be focused on reducing inflation if:
   a. Reserve requirements increase and government spending decreases
   b. Federal funds rate target goes down and taxes go up
   c. The Fed sells bonds and taxes decrease
   d. The discount window rate is lower and government spending is higher

38) A US dollar buys 105 Japanese yen. A basket of goods costs $21 in the US and 3000 yen in Japan. The real exchange rate (in terms of Japanese goods per US goods) is:
   a. 0.735
   b. 15000
   c. 105
   d. 1

39) Phillips Curve shows the relationship between unemployment and inflation when:
   a. LRAS is constant
   b. SRAS is constant
   c. AD is constant
   d. All of the above
40) Bond A has a higher price than Bond B. This is consistent with the fact that Bond A and Bond B are exactly the same except than Bond A has:
   a. A lower bond rating
   b. A higher face value
   c. Fewer coupon payments
   d. Smaller coupon payments

41) CPI is 120 in 2015 and 80 in 1995. In 1995 I bought a gold coin for $120, which today would sell for $660. In 2015 dollars, how much did I pay for the gold coin in 1995?
   a. $80
   b. $120
   c. $180
   d. $440

42) Which of these summarizes the difference between the New Keynesian and Real Business Cycle (RBC) theories in the context of the AD-AS model?
   a. The AD curve is flatter in the New Keynesian theory than in the RBC theory
   b. The Phillips Curve is flatter in the New Keynesian theory than in the RBC theory
   c. The SRAS curve is flatter in the New Keynesian theory than in the RBC theory
   d. The LRAS curve is flatter in the New Keynesian theory than in the RBC theory

43) The German hyperinflation episode provided evidence in favor of:
   a. Sticky prices
   b. Rational expectations
   c. Implementation lags
   d. High sacrifice ratio

44) When the Chinese government has decided to keep the value of its currency low, which of these does not result from this policy?
   a. China uses US dollars to purchase US government debt
   b. Consumer prices in the US are lower
   c. Consumer prices in China are lower
   d. Chinese exports are higher

45) In the 1840s, the US states had a debt crisis and the federal government:
   a. Nationalized their debt and committed to pay it off
   b. Refused to bail them out
   c. Switched to a fiat money system
   d. Nationalized their debt and partially repaid it
46) If output is at its natural rate then:
   a. Prices are at their natural rate
   b. Unemployment is at its natural rate
   c. Inflation is at its natural rate
   d. Inflation is at zero

47) The Fed’s response to the Great Depression extended or intensified the depression:
   a. Because the Fed increased the money supply
   b. By allowing banks to fail
   c. Because the Fed decreased the money supply
   d. Both b & c

48) What are the automatic and discretionary components of fiscal policy?
   a. The automatic components are those fiscal actions that require accommodation
      from monetary policy, while the discretionary components do not.
   b. The automatic components do not require deliberate action on the part of the
      government, while the discretionary components do.
   c. The automatic components stimulate the economy, while the discretionary
      components serve purposes unrelated to the health of the overall economy.
   d. The automatic components are limited to government expenditures, while the
      discretionary components entail changes in both taxes and expenditures.

49) “Too big to fail” is an example of:
   a. Correlated Risk
   b. Moral Hazard
   c. Zero Lower Bound
   d. Market Concentration

50) Banks currently have high excess reserves. This is a risk because:
   a. If they lend them out the money supply could quickly increase
   b. If they lend them out the money supply could quickly decrease
   c. It exacerbates the “too big to fail” problem
   d. It increases wealth inequality

51) Suppose $1 is moved from a checking account to a long term savings account. Then:
   a. M1 goes up by $1
   b. M1 goes down by $1
   c. M1 goes down by $1 and M2 goes up by $1
   d. M1 goes up by $1 and M2 goes up by $1
52) Which person is not counted in the labor force?
   a. Someone unemployed for one day
   b. A full time student with no other employment
   c. Someone working in a government office
   d. Someone unemployed for two weeks
53) In the Solow growth model, if the savings rate increases today, consumption:
   a. Increases both in the short run and the long run
   b. Decreases in the short run and increases in the long run
   c. Decreases in the short run and may or may not increase in the long run
   d. May or may not increase in the short run and increases in the long run
54) Argentina’s policy of Import Substitution Industrialization (ISI) attempted to:
   a. Greatly subsidize their weakest industries to compete in international markets
   b. Increase industrial productivity by protecting industry from foreign competition
   c. Focus on particular industries with the goal of increasing exports
   d. Greatly increase tariffs to reduce imports and increase net exports
55) South Korea achieved very fast growth in the 1970s and 1980s because:
   a. The government removed existing regulation and barriers to free trade
   b. Government policy focused on stability and increasing exports
   c. Korean culture favored individual initiative and self-improvement
   d. Korea had always been a very wealthy nation so naturally recovered from war
56) The vast majority of the increase in real GDP per capita in the US over the past 50 years can be explained by:
   a. Inflation
   b. Female labor force participation
   c. Productivity
   d. Capital investment
57) Suppose the domestic country institutes a tax break on investment. This causes:
   a. Domestic interest rates to rise and net capital outflows to fall
   b. Domestic interest rates to fall and net capital outflows to rise
   c. Both domestic interest rates and net capital outflows to fall
   d. Both domestic interest rates and net capital outflows to rise
58) Which of these is not counted in GDP?
   a. Accounting services purchased by households
   b. Accounting services purchased by domestic firms
   c. Accounting services purchased by the government
   d. Accounting services purchased by foreign firms

59) Which of these categories is the largest for the United States?
   a. Consumption
   b. Investment
   c. Government purchases
   a. Exports

60) Which of these is categorized in GDP as investment?
   a. Rent paid to the owner of a home
   b. Fees paid for purchases of corporate stock
   c. Production machines sold to a foreign country
   d. Toys made this year that are unsold in a warehouse at the end of the year