Midterm 1

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: Short Answer (6 of 100 points)

a) What is the definition of gross domestic product?

The market value of all final goods and services produced in a particular location over some period of time.

b) What is the purpose of the loans made by the IMF?

The purpose of the IMF is to provide short term loans to get economies through short term crises and, in particular, to stabilize exchange rates.

c) What was the average growth rate of real GDP per working age person in the US during the 20th century? 2 %
Part II: Components of GDP (11 of 100 points)

Suppose these were all the economic activities in a small country last year.

For each, indicate the dollar value that each contributes to each component of GDP. If an item does not contribute to GDP, write “none”.

<table>
<thead>
<tr>
<th></th>
<th>C</th>
<th>I</th>
<th>G</th>
<th>NX</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Households buy $400 worth of apples.</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Businesses buy $200 worth of machines to sort apples, and spend $75 on fertilizer to aid in the growing of apples.</td>
<td></td>
<td>200</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. The government collects $200 in taxes. Of this, $50 is used to pay the tax collector and $150 is given in cash to the poor.</td>
<td></td>
<td></td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>4. Businesses sell $50 of plums to foreigners.</td>
<td></td>
<td></td>
<td></td>
<td>50</td>
</tr>
<tr>
<td>5. Households live in 100 identical houses. Of these, 25 houses are rented for $3 each and 75 are lived in by their owners.</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Households buy $100 worth of dried apricots that were held in inventory from last year.</td>
<td>100</td>
<td>-100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Businesses buy $100 of pears from another country. Of this, $50 is bought by households and $50 is stored for next year.</td>
<td>50</td>
<td>50</td>
<td></td>
<td>-100</td>
</tr>
<tr>
<td>8. A factory learns how to make less smoke each year. The resulting cleaner air is valued at $100 by the population.</td>
<td></td>
<td></td>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>
Suppose the CPI basket is composed of 1 car and 500 pounds of corn.

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>$12,000</td>
<td>$12,500</td>
<td>$14,000</td>
<td>$15,000</td>
<td>$14,000</td>
</tr>
<tr>
<td>Corn (per lb)</td>
<td>$1.20</td>
<td>$1.40</td>
<td>$1.40</td>
<td>$1.20</td>
<td>$2.00</td>
</tr>
</tbody>
</table>

Use the information above to compute CPI, given than the base year is 2015.

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPI</td>
<td>84</td>
<td>88</td>
<td>98</td>
<td>104</td>
<td>100</td>
</tr>
</tbody>
</table>

Here are some other prices in the same years:

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>$21</td>
<td>$44</td>
<td>$24</td>
<td>$50</td>
<td>$36</td>
</tr>
<tr>
<td>Bread</td>
<td>$2.80</td>
<td>$2.95</td>
<td>$3.49</td>
<td>$3.55</td>
<td>$3.50</td>
</tr>
<tr>
<td>Laptop</td>
<td>$819</td>
<td>$724</td>
<td>$689</td>
<td>$715</td>
<td>$625</td>
</tr>
</tbody>
</table>

In real terms (that is, taking into account CPI inflation) in which year were:

1) Laptops the cheapest? 2015
2) Laptops the most expensive? 2011
3) Oil the cheapest? 2013
4) Oil the most expensive? 2012
5) Bread the cheapest? 2011
6) Bread the most expensive? 2013

7) How much would a laptop have to cost in 2015 to have the same real price that it did in 2011? 975

8) How would your answer to question 7 change if 2011 was the base year instead? (circle one): HIGHER SAME LOWER
Part IV: Multiple Choice (70 of 100 points)
For each question, circle exactly one correct answer.

1) A consumer pays $800 for a sofa. If you added together the value added at every step in the production process to build and deliver that sofa, the sum would be:
   a. Less than $800
   b. Equal to $800
   c. Greater than $800
   d. Not enough information

2) Nominal GDP in 2010 in Country X was $220 billion and GDP Deflator was 110. Inflation in Country X is always positive. What was 2010 real GDP, and is the base year before or after 2010?
   a. $200 billion, and base year is before 2010
   b. $242 billion, and base year is before 2010
   c. $200 billion, and base year is after 2010
   d. $242 billion, and base year is after 2010

3) Which of these is a final good for the purposes of computing GDP?
   a. Social security payments to retirees
   b. Nails sold to a professional carpenter
   c. Consulting fees paid by a candy manufacturer to external consultants
   d. The estimated rental value of an owner-occupied house

4) “Home production” is:
   a. Not counted in GDP
   b. Counted as consumption in GDP
   c. Counted as investment in GDP
   d. Counted as an intermediate good in GDP

5) There are only two countries in the world: Country A and Country B. Country A has GDP of $5 trillion and Country B has GDP of $2 trillion. Country A has GNP of $4 trillion and has a trade deficit with Country B equal to $500 billion. What is the GNP of Country B?
   a. $2 trillion
   b. $2.5 trillion
   c. $3 trillion
   d. Not enough information
6) In 2011, China revised its poverty line to 2,300 yuan per year, or 6.3 yuan per day. At the prevailing exchange rate, this was equal to a little less than 1 U.S. dollar. Some believed that China’s poverty line fell short of the World Bank’s poverty line of $1.25 per day, in 2005 purchasing power parity (PPP) U.S. dollars. Is this correct?
   a. No, it is not a good comparison to measure Chinese poverty against the world
   b. Yes, we should measure poverty across countries so that action can be taken
   c. Yes, both values are adjusted by the prevailing exchange rate
   d. No, the Chinese poverty measure is not stated in 2005 PPP U.S. dollars

7) An economy certainly has higher productivity if:
   a. It has greater output with more inputs
   b. It has greater output with fewer inputs
   c. Standard of living is higher
   d. The trade deficit is declining

8) The “subsistence level” is:
   a. The minimum level of income needed to survive
   b. The maximum level of saving needed to maintain consumption levels
   c. The minimum level of investment to sustain the current capital stock
   d. The minimum level of GDP growth needed to maintain a standard of living

9) Unlike extractive economic institutions, inclusive economic institutions:
   a. Have laws that promise civil rights
   b. Enforce contracts
   c. Create barriers to entry
   d. Have no burdensome regulations

10) The investment category of GDP includes:
    a. Purchase of corporate stock
    b. Sale of both old and new homes
    c. Changes in inventories of products
    d. New roads on the interstate highway system

11) When deciding how much to invest, an individual household takes all of the following into account, except for what?
    a. Expected future income growth
    b. Interest rates
    c. Expected future taxes
    d. Expected future investment needs of the nation
12) Thomas Malthus believed economic growth could never happen because technological progress would be swamped by ________. He was proven wrong because of ________.
   a. Population growth; the Industrial Revolution
   b. Food shortages; improved agricultural technology
   c. Excessive taxation; transition to democracy
   d. Unskilled labor force; universal education

13) Today Mexico has GDP per capita of $18,500 and Italy has GDP per capita of $37,000. Mexico has been growing at 2% per year for the last 20 years. In that time, Italy has grown at 0% per year. If these rates continue, use the Rule of 70 to figure out in how many years will Mexico have the same GDP per capita as Italy.
   a. 35
   b. 70
   c. 140
   d. Will never happen

14) Unemployment is a “lagging indicator” of a recession because:
   a. Unemployment is higher during recessions than before them
   b. Unemployment peaks at or after the end of the recession
   c. Unemployment peaks at or before the beginning of the recession
   d. Unemployment is higher during recessions than after them

15) Which of these 30 year periods is consistent with “catch up growth”?
   a. A poor country sustains a constant 8% growth rate for 30 years
   b. A poor country grew at 4% for 15 years, then increased to 8% for 15 years
   c. A poor country’s growth was 9% 30 years ago and the growth rate has steadily declined to 4% today
   d. A rich country was shrinking at 3% 30 years ago, and is shrinking at 5% today

16) The fact that China had no growth from 1850 until 1980 when Deng Xiaoping implemented reform is consistent with the:
   a. Culture hypothesis, because China’s Confucian culture led to growth
   b. Geography hypothesis, because China’s size and natural resources led to growth
   c. Institutions hypothesis, because the reforms replaced ineffective Chinese institutions with better functioning ones
   d. Fundamental prosperity hypothesis, because China had been one of the wealthiest parts of the world for thousands of years
17) Economists focus on studying GDP per capita, which ignores inequality, because:
   a. Greater GDP per capita implies lower levels of poverty
   b. Greater GDP per capita is observed to be associated with greater welfare
   c. Production is an economic problem whereas inequality is a political problem
   d. Production is an economic problem whereas inequality is a moral problem

18) Which of these situations would cause both an increase in the labor force participation rate and an increase in the unemployment rate?
   a. Discouraged worker thinks the labor market is improving and applies for jobs
   b. A full time student takes a part time job at a grocery store
   c. An older worker who was just laid off decides to retire rather than look for a job
   d. A person with two part time jobs is laid off from one of them

19) Which of these situations results in a change in GDP?
   a. A consumer directly imports a car from Germany for $100,000
   b. Governments tax households an extra $100 million to pay for food stamps
   c. One investor pays another investor $5 million for corporate stock
   d. A stay-at-home parent pays $900 for their child to go to daycare

20) Which of these is a reason that CPI and GDP Deflator differ?
   a. CPI is measured by market research firms, while GDP Deflator is measured by the government
   b. CPI has a fixed set of goods, while GDP Deflator has a fixed set of prices
   c. CPI measures prices relative to a base year, while GDP Deflator does not
   d. CPI growth can be called inflation, while GDP Deflator growth cannot

21) If inflation is always positive, then for any good, the growth of its nominal price with be ______ than the growth its real price. Also, the nominal price today is always ______ than the price today adjusted to a previous year’s dollars.
   a. Greater; greater
   b. Greater; less
   c. Less; greater
   d. Less; less

22) Which of these does GDP include?
   a. Education costs
   b. Healthcare costs
   c. Military costs
   d. All of the above
23) Which of these would be a question studied by “growth economics”?
   a. Why is US GDP growth this year lower than 2%?
   b. **Why is the ratio of real income between the US and India equal to 9?**
   c. Why is Nigerian GDP growth this year higher than last year?
   d. How could a developing country more efficiently collect taxes?

24) Which of these would be a question studied by “development economics”?
   a. Could Liberia increase aggregate income by increasing health expenditure?
   b. **How much do microfinance loans increase business profit?**
   c. Does Togo or Benin have a more effective education system?
   d. Why did the Industrial Revolution enable development in Europe?

25) How did the growth experience of South Korea (1960-now) differ from that of China (1980-now)?
   a. China was authoritarian while South Korea was a democracy
   b. **China received no outside aid while South Korea received aid from the US**
   c. China retained state controls on production while South Korea pursued completely free markets
   d. China did not open to trade until later while South Korea opened to trade early in their growth experience

26) China’s growth experience is unusual because:
   a. China has grown faster than any country over a 35 year period
   b. **China is the largest country to ever experience fast growth**
   c. China has achieved fast growth by competing with other countries in international markets rather than protecting their industries
   d. All of the above

27) South Korean industrial policy focused on stability by:
   a. Slowly implementing reform by using Special Economic Zones
   b. **Maintaining very stable interest rates and exchange rates**
   c. Pegging the value of the Korean won to the US dollar
   d. Signing a peace treaty with North Korea

28) Import Substitution Industrialization is an attempt to:
   a. Protect domestic industry from foreign competition
   b. Grow a country’s least productive and most imported industries
   c. Reduce the country’s dependence on foreign trade
   d. **All of the above**
29) The “Great Leap Forward” failed because of:
   a. Invasion of coastal areas by Japan
   b. Focus on developing domestic industry and not engaging in trade
   c. Assumed increases in agricultural productivity never materialized
   d. Budget problems generated by an expensive system of subsidies

30) Over the last 20 years, China’s exchange rate strategy has:
   a. Kept the value of the Chinese yuan low, which has increased prices of US consumer goods
   b. Kept the value of the Chinese yuan low, which has decreased prices of US consumer goods
   c. Kept the value of the Chinese yuan high, which has increased prices of US consumer goods
   d. Kept the value of the Chinese yuan high, which has decreased prices of US consumer goods

31) The “Bretton Woods” conference that resulted in the creation of the World Bank and International Monetary Fund was initiated out of concern that:
   a. Developing countries were not growing fast enough
   b. The world could plunge back into depression when the war ended
   c. Exchange rates were too volatile, resulting in many crises
   d. Wealthy countries were missing out on market opportunities in poor countries

32) Which of these illustrates “cyclical” unemployment?
   a. Due to the long run decline of manufacturing, some predominantly industrial towns have higher unemployment than the national average
   b. Due to worries about the market, a factory reduces orders and lays off workers
   c. Younger people tend to move between jobs much more frequently than older people
   d. A worker suspects they could make more money in computer programming and quits their current job to search for a programming job

33) In the Solow Growth Model, steady state capital is the point where:
   a. GDP is maximized
   b. One more unit of capital has no effect on output
   c. Investment is equal to depreciation
   d. Consumption is maximized
34) In the Solow Growth Model, if the depreciation rate rises, consumption:
   a. **Is the same in the short run and falls in the long run**
   b. Is lower in the short run and the long run
   c. Is ambiguous in the short run and rises in the long run
   d. Is higher in the short run and the long run

35) In the Solow Growth Model higher savings, in the long run, results in:
   a. **Higher capital and higher GDP**
   b. Higher capital and lower GDP
   c. Higher GDP and higher consumption
   d. Higher GDP and lower consumption