Name:

Instructions: Clearly mark what you believe is the best answer to each one of the following problems.

Question 1 Multiple Choice 2.5 points
To study economic growth across countries, you should compare growth in ________ across countries.

- inflation rates
- real GDP per person (after using exchange rates to transform into a common currency)
- unemployment
- real GDP per person in PPP units

Question 2 Multiple Choice 2.5 points
The GDP per person of the High Inflation country doubled between 1986 and 2006. Thus, we can say that the amount of goods available in High Inflation country also doubled.

- True
- False

Question 3 Multiple Choice 2.5 points

<table>
<thead>
<tr>
<th>Period</th>
<th>Price index</th>
<th>Inflation rate (percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>117</td>
<td>A</td>
</tr>
<tr>
<td>3</td>
<td>125</td>
<td>B</td>
</tr>
<tr>
<td>4</td>
<td>120</td>
<td>C</td>
</tr>
<tr>
<td>5</td>
<td>D</td>
<td>8.3</td>
</tr>
<tr>
<td>6</td>
<td>150</td>
<td>E</td>
</tr>
</tbody>
</table>

What inflation rate corresponds to space B in the Table above?

- 17.0 percent
- 6.8 percent
- 8.3 percent
- -4.0 percent

Question 4 Multiple Choice 2.5 points
The largest component of GDP is (for this you need to go to the BEA website (www.bea.gov), access the National Income and Product Accounts and look at table 1.1.5 "Gross domestic product")

- gross private domestic investment.
- personal consumption expenditures.
- net exports of goods and services.
- government purchases of goods and services.

Question 5 Multiple Choice 2.5 points
From the data in the above table, GDP equals
- $1,120.
- $1,280.
- $1,290.
- $1,360.

**Question 6  Multiple Choice** 2.5 points
In years with inflation, real GDP increases ________ nominal GDP.
- faster than
- slower than
- at the same rate as
- sometimes faster, sometimes slower, and sometimes at the same rate as

**Question 7  Multiple Choice** 2.5 points
If nominal GDP is $5 trillion and the price level (a price index) is 1.25, what is real GDP?
- $5 trillion
- $5.25 trillion
- $4 trillion
- $3.75 trillion

**Question 8  Multiple Choice** 2.5 points
Which of the following is not a final good?
- a new computer sold to an NYU student
- a new car sold to Avis for use in their fleet of rental cars
- a purse sold to a foreign visitor
- a hot dog sold to a spectator at a Chicago Bears football game

**Question 9  Multiple Choice** 2.5 points

<table>
<thead>
<tr>
<th>Item</th>
<th>Millions of dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal consumption expenditure</td>
<td>80</td>
</tr>
<tr>
<td>Government purchases of goods and services</td>
<td>30</td>
</tr>
<tr>
<td>Net taxes</td>
<td>25</td>
</tr>
<tr>
<td>Gross private domestic investment</td>
<td>20</td>
</tr>
<tr>
<td>Imports of goods and services</td>
<td>10</td>
</tr>
<tr>
<td>Exports of goods and services</td>
<td>20</td>
</tr>
</tbody>
</table>
Use the information in the table above to calculate the value of net exports.

- $10 million
- $0
- -$10 million
- $30 million

**Question 10  Multiple Choice**

2.5 points

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Books</td>
<td>10</td>
<td>$30</td>
<td>8</td>
<td>$50</td>
</tr>
<tr>
<td>Pens</td>
<td>20</td>
<td>$1</td>
<td>15</td>
<td>$2</td>
</tr>
</tbody>
</table>

In 2004, consumers in Dexter consumed only books and pens. The prices and quantities for 2004 and 2005 are listed in the table above. The reference base period for Dexter's CPI is 2004. What is the CPI in 2005?

- 1.00
- 2.00
- 1.68

**Question 11  Multiple Choice**

2.5 points

<table>
<thead>
<tr>
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<td>$1</td>
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In 2004, consumers in Dexter consumed only books and pens. The prices and quantities for 2004 and 2005 are listed in the table above. The reference base period for Dexter's CPI is 2004. What is the cost of the basket used to construct the CPI during 2005?

- $430
- $335
- $320
- $540

**Question 12  Multiple Choice**

2.5 points

Average Labor Productivity (ALP) rises

- if the amount of capital per worker increases.
- in the absence of technological progress.
- if firms invest in hiring more workers rather than buying more capital.
- if the amount of capital per worker decreases.

**Question 13  Multiple Choice**

2.5 points

Separating the sources of economic growth is the purpose behind

- the national income accounts.
- the production possibilities curve.
- macroeconomics.
- growth accounting.
Question 14 Multiple Choice 2.5 points
The key tool of growth accounting is the aggregate
- demand curve.
- supply curve.
- production function.
- expenditure function.

Question 15 Multiple Choice 2.5 points
The equation  \( Y = f(L, K, TFP) \) where  \( Y = \) real GDP,  \( L = \) labor,  \( K = \) capital, and  \( TFP = \) Efficiency
- is known as the labor function.
- is known as the aggregate production function.
- shows that the faster technology grows, the faster real GDP grows.
- Both answers: is known as the aggregate production function, and shows that the faster technology grows, the faster real GDP grows are correct.

Question 16 Multiple Choice 2.5 points
Labor productivity equals (where  \( Y \) denotes GDP,  \( L \) the number of workers, and  \( K \) the stock of capital)
- \( Y/L \).
- \( K/L \).
- \( TFP/L \).
- the percentage change in the labor input  \( L \).

Question 17 Multiple Choice 2.5 points
The productivity curve is a relationship between
- real GDP per hour of labor and capital per hour of labor, with technology held constant.
- nominal GDP per hour of labor and capital per hour of labor, with technology held constant.
- real GDP per hour of labor and capital per hour of labor whenever technological growth occurs.
- capital per hour of labor and technological growth.

Question 18 Multiple Choice 2.5 points
The productivity curve shows that an increase in technological progress results in
- an increase in the level of real GDP per hour of labor at any level of capital per hour of labor.
- no change in the level of real GDP per hour of labor at any level of capital per hour of labor.
- a decrease in the level of real GDP per hour of labor at any level of capital per hour of labor.
- an increase in the quantity of labor.

Question 19 Multiple Choice 2.5 points
The shape of the productivity curve reflects the
- effects of capital accumulation.
- effects of technological progress.
- law of diminishing returns.
effects of population growth.

Question 20 Multiple Choice 2.5 points
The law of diminishing returns states that, as
- the quantity of one input used in production increases, all else being the same, output increases.
- technology increases, all else being the same, output increases.
- the quantity of one input used in production increases, all else being the same, output increases by ever larger amounts.
- the quantity of one input used in production increases, all else being the same, output increases by ever smaller amounts.

Question 21 Multiple Choice 2.5 points
Suppose that capital per hour of labor has increased by 9 percent. Output per hour of labor has risen by 10 percent. According to the one-third rule, capital per hour of labor accounts for
- 7 percent of the growth rate in output per hour of labor, with technology accounting for the remaining 3 percent.
- 4 percent of the growth rate in output per hour of labor, with technology accounting for the remaining 6 percent.
- 2 percent of the growth rate in output per hour of labor, with technology accounting for the remaining 8 percent.
- The full 9 percent of the growth rate in output per hour of labor, technology plays no role.

Question 22 Multiple Choice 2.5 points
Suppose that real GDP grew by 6 percent last year and the capital per hour of labor grew 9 percent. Using the one-third rule, GDP per hour of labor increased by _____________ as a result (exclusively) of the increase in capital per worker
- 6 percent
- 4 percent
- 3 percent
- 2 percent

Question 23 Multiple Choice 2.5 points
Real GDP per person in the country of Flip is $10,000 PPP dollars, and the growth rate is 10 percent a year. Real GDP per person in the country of Flap is $20,000 PPP dollars and the growth rate is 5 percent a year. When will real GDP per person be greater in Flip than in Flap?
- in 2 years
- in 15 years
- never
- in 10 years

Question 24 Multiple Choice 2.5 points
<table>
<thead>
<tr>
<th>change in per capita GDP</th>
<th>changes in capital per worker</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-1996: 3.90%</td>
<td>5.28%</td>
</tr>
<tr>
<td>1998-2001: -6.54%</td>
<td>8.73%</td>
</tr>
</tbody>
</table>

The above table presents some data for Argentina at two different periods. Researchers from the World Bank have suggested that the large drop in GDP per person of Argentina that occurred during 1998-2001 was due to a drop in investment (and therefore capital per worker available). The hypothesis of the World Bank researchers have proposed _________. This suggests that _________ to better understand what happened in Argentina during 1998-2001.

- is validated by the above data; we need a better understanding of why capital fell so much
- is not validated by the data. Moreover, changes in TFP account for the drop in GDP; we need a better understanding of why TFP fell so much

Question 25 Multiple Choice 3 points

☐ The capital stock in the economy is the
- quantity of plant, equipment, and inventories.
- total financial assets of the public.
- financial assets held by firms.
- quantity of plant and equipment owned by governments.

Question 26 True/False 3 points

☐ If investment during year 2006 is positive then it must be the case that the capital stock of 2007 will be higher than that of 2006
- True
- False

Question 27 Multiple Choice 6 points

☐ By the end of 2006, the US GDP, capital stock, labor force, and TFP equaled $11734.3 bn, $37610bn, 190bn hours, and 10.23, respectively. Consider a capital depreciation rate of 5% and a saving rate of 16.026% for 2007. Assume that TFP and the size of the labor force are not expected to change much during 2007, what is the forecasted value (using the Solow model) for the US capital stock by the end of 2007?

- Much lower than 37610
- Much higher than 37610
- 37610