Questions and Answers

Chapter 1

Q1: MCQ

1. Macroeconomics approaches the study of economics from the viewpoint of:
   A) the entire economy.
   B) governmental units.
   C) the operation of specific product and resource markets.
   D) individual firms.
   Answer: A

2. Which of the following is associated with macroeconomics?
   A) an examination of the incomes of Harvard Business School graduates
   B) an empirical investigation of the general price level and unemployment rates since 1990
   C) a study of the trend of pecan prices since the Second World War
   D) a case study of pricing and production in the textbook industry
   Answer: B

3. The problems of aggregate inflation and unemployment are:
   A) major topics of macroeconomics.
   B) not relevant to the U.S. economy.
   C) major topics of microeconomics.
   D) peculiar to command economies.
   Answer: A

4. Which of the following statements pertains to macroeconomics?
   A) Because the minimum wage was raised, Mrs. Olsen decided to enter the labor force.
   B) A decline in the price of soybeans caused farmer Wanek to plant more land in wheat.
   C) The national productivity rate grew by 2.7 percent last year.
   D) The Pumpkin Center State Bank increased its interest rate on consumer loans by 1 percentage point.
   Answer: C

5. Macroeconomics can best be described as the:
   A) analysis of how a consumer tries to spend income.
   B) study of the large aggregates of the economy or the economy as a whole.
   C) analysis of how firms attempt to maximize their profits.
   D) study of how supply and demand determine prices in individual markets.
   Answer: B

6. Nominal GDP is:
   A) the sum of all monetary transactions that occur in the economy in a year.
B) the sum of all monetary transactions involving final goods and services that occur in the economy in a year.
C) the amount of production that occurs when the economy is operating at full employment.
D) money GDP adjusted for inflation.
Answer: B

7. **Real GDP refers to:**

A) the value of the domestic output after adjustments have been made for environmental pollution and changes in the distribution of income.
B) GDP data that embody changes in the price level, but not changes in physical output.
C) GDP data that reflect changes in both physical output and the price level.
D) GDP data that have been adjusted for changes in the price level.
Answer: D

8. **Real GDP measures:**

A) current output at current prices. C) base year output at current prices.
B) current output at base year prices. D) base year output at current exchange rates.
Answer: B

9. **Nominal GDP is adjusted for price changes through the use of:**

A) the Consumer Price Index (CPI). C) the GDP price index.
B) the Producer Price Index (PPI). D) exchange rates.
Answer: C

10. **A price index is:**

A) a comparison of the price of a market basket from a fixed point of reference.
B) a comparison of real GDP in one period relative to another.
C) the cost of a market basket of goods and services in a base period divided by the cost of the same market basket in another period.
D) a ratio of real GDP to nominal GDP.
Answer: A

11. **The GDP price index:**

A) includes fewer goods and services than the consumer price index.
B) is identical to the consumer price index.
C) is another term for the producer price index.
D) includes all goods comprising the nation's domestic output.
Answer: D

12. **If real GDP falls from one period to another, we can conclude that:**

A) deflation occurred. C) nominal GDP fell.
B) inflation occurred. D) none of the above necessarily occurred.
Answer: D
13. If real GDP in a particular year is $80 billion and nominal GDP is $240 billion, the GDP price index for that year is:
   A) 100.    B) 200.    C) 240.    D) 300.  
   Answer: D

14. Suppose a nation's 2003 nominal GDP was $972 billion and the general price index was 90. To make the 2003 GDP comparable with the base year GDP, the 2003 GDP must be:
   A) adjusted downward to $678 billion.    C) inflated to $1080 billion.  
   B) deflated to $896 billion.    D) deflated to $1080 billion.  
   Answer: C

15. Real GDP and nominal GDP differ because the real GDP:
   A) is adjusted for changes in the volume of intermediate transactions.  
   B) includes the economic effects of international trade.  
   C) has been adjusted for changes in the price level.  
   D) excludes depreciation charges.  
   Answer: C

16. If nominal GDP rises:
   A) real GDP may either rise or fall.    C) real GDP must fall.  
   B) we can be certain that the price level has risen.    D) real GDP must also rise.  
   Answer: A

17. Real GDP is:
   A) the nominal value of all goods and services produced in the economy.  
   B) the nominal value of all goods and services produced in the domestic economy corrected for inflation or deflation.  
   C) that aggregate output that is produced when the economy is operating at full employment.  
   D) always greater than nominal GDP.  
   Answer: B

18. In comparing GDP data over a period of years, a difference between nominal and real GDP may arise because:
   A) of changes in trade deficits and surpluses.  
   B) the length of the workweek has declined historically.  
   C) the price level may change over time.  
   D) depreciation may be greater or smaller than gross investment.  
   Answer: C

19. The phase of the business cycle in which real GDP declines is called:
   A) the peak.  B) a recovery.  C) a recession.  D) the trough.  
   Answer: C
20. The phase of the business cycle in which real GDP is at a minimum is called:

A) the peak. B) a recession. C) the trough. D) the pits.
Answer: C

21. A recession is a period in which:

A) cost-push inflation is present. C) demand-pull inflation is present.
B) nominal domestic output falls. D) real domestic output falls.
Answer: D

22. Kimberly voluntarily quit her job as an insurance agent to return to school full-time to earn an MBA degree. With degree in hand she is now searching for a position in management. Kimberly presently is:

A) cyclically unemployed. C) frictionally unemployed.
B) structurally unemployed. D) not a member of the labor force.
Answer: C

23. To be officially unemployed a person must:

A) be in the labor force. C) have just lost a job.
B) be 21 years of age or older. D) be waiting to be called back from a layoff.
Answer: A

24. The natural rate of unemployment is:

A) higher than the full-employment rate of unemployment.
B) lower than the full-employment rate of unemployment.
C) that rate of unemployment occurring when the economy is at its potential output.
D) found by dividing total unemployment by the size of the labor force.
Answer: C

25. The labor force includes:

A) employed workers and persons who are officially unemployed.
B) employed workers, but excludes persons who are officially unemployed.
C) full-time workers, but excludes part-time workers.
D) permanent employees, but excludes temporary employees.
Answer: A

Use the following diagram to answer questions 26-35:
26. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (1) might represent:

A) corporate income tax payments.
B) government provision of highways for truck transportation.
C) business property tax payments.
D) transfer payments to low-income families.
Answer: B

27. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (2) might represent:

A) the provision of national defense by government.
B) a government subsidy to farmers.
C) corporate income tax payments.
D) welfare payments to low-income families.
Answer: C

28. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (3) might represent:

A) government salaries paid to school teachers
B) property tax payments.
C) a state university's purchase of computers.
D) social security payments to retirees.
Answer: A

29. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (4) might represent:

A) the services of NASA astrophysicists.
B) the purchase of Stealth bombers.
C) personal income taxes.
D) investment spending by private corporations.
Answer: A
30. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (5) might represent:

A) personal income tax revenues.
B) the provision of public schools by local governments.
C) the purchase of laptop computers by the state of Iowa.
D) transfer payments to unemployed workers.
Answer: B

31. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (6) might represent:

A) the payment of payroll taxes by households.
B) corporate income tax payments.
C) the purchase of basketballs by the Ogallala school district.
D) the purchase of armored personnel vehicles by government.
Answer: A

32. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (7) might represent:

A) a transfer payment to disabled persons.
B) wage payments to public school teachers.
C) subsidies to corporations to stimulate exports.
D) the U. S. Bureau of Engraving and Printing's expenditures for paper.
Answer: D

33. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. Flow (8) might represent:

A) personal income taxes. C) the services of firefighters.
B) automobile purchases by the state of Maine. D) subsidies to farmers.
Answer: B

34. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. If the economy were in a serious recession, it would be most appropriate for government to:

A) increase flows (3) and (7) and reduce flows (2) and (6).
B) decrease flows (3) and (7) and increase flows (2) and (6).
C) increase flows (2) and (3) and reduce flows (6) and (7).
D) increase all of the monetary flows.
Answer: A

35. Refer to the above diagram, in which solid arrows reflect real flows; broken arrows are monetary flows. If the economy were experiencing inflation due to excess aggregate spending, it would be most appropriate for government to:

A) increase flows (3) and (7) and reduce flows (2) and (6).
B) decrease flows (3) and (7) and increase flows (2) and (6).
C) increase flows (2) and (3) and reduce flows (6) and (7).
D) increase all of the monetary flows.
Answer: B

Use the following diagram to answer questions 36-39:

36. Refer to the above diagram. Flow (1) represents:

A) wage, rent, interest, and profit income. C) goods and services.
B) land, labor, capital, and entrepreneurial ability. D) consumer expenditures.
Answer: A

37. Refer to the above diagram. Flow (2) represents:

A) wage, rent, interest, and profit income. C) goods and services.
B) land, labor, capital, and entrepreneurial ability. D) consumer expenditures.
Answer: B

38. Refer to the above diagram. Flow (3) represents:

A) wage, rent, interest, and profit income. C) goods and services.
B) land, labor, capital, and entrepreneurial ability. D) consumer expenditures.
Answer: C

39. Refer to the above diagram. Flow (4) represents:

A) wage, rent, interest, and profit income. C) goods and services.
B) land, labor, capital, and entrepreneurial ability. D) consumer expenditures.
Answer: D

40. In terms of the circular flow diagram, households make expenditures in the _____ market and receive income through the _____ market.
A) product; financial B) resource; product C) product; resource D) capital; product
Answer: C

41. In terms of the circular flow diagram, businesses obtain revenue through the _____
market and make expenditures in the _____ market.

A) product; financial B) resource; product C) product; resource D) capital; product
Answer: C

42. Households and businesses are:

A) both buyers in the resource market.
B) both sellers in the product market.
C) sellers in the resource and product markets respectively.
D) sellers in the product and resource markets respectively.
Answer: C

43. In the circular flow model:

A) households sell resources to firms.
B) households receive income through the product market.
C) households spend income in the resource market.
D) businesses neither buy nor sell resources.
Answer: A

Q2: State why each of the following statements is true or false:

1. If GDP deflator for the period 1995-2000 is 140%, this means that we can only buy with $40 in 2000 what we can buy with $100 in 1995.
   
   **False**, because GDP deflator for the period 1995-2000 is 140% means that we can buy with $140 in 2000 what we can buy with $100 in 1995.

2. The business cycle is so named because upswings and downswings in business activity are equal in terms of duration and intensity.
   
   **False**

3. Both nominal and real GDP increase with the rise in the price level.
   
   **False**. Nominal GDP = output \times price level (calculated in current prices)
   Real GDP = output \times price level (calculated in fixed prices)

4. GDP is the value of all goods and services produced in the economy.
   
   **False**. GDP = Gross Domestic Product GDP = Value of *FINAL* goods & services produced in the economy.

5. Inflation is bad for the economy because goods and services are more expensive.
   
   **True**. Inflation usually leads to distortions because all prices and wages do not rise proportionately during inflationary periods. So, inflation affects income distribution and may lead to uncertainties about the future which is considered not good.
6. The implicit GDP deflator is considered the most comprehensive index of the price level.
   
   **True.** Because it includes all goods and services that are produced by the entire economy.

7. When the economy is operating at its potential level of output, there cannot be unemployment.
   
   **False.** Because at potential level of output where \( Y^* = Y \) there must be frictional and structural unemployment.

8. CPI reflects the change in cost of living during the year.
   
   **True,** because it is the average cost of the goods and services purchased by households.

9. CPI is a perfect measure of the cost of living.
   
   **False.** CPI is not a perfect measure of the cost of living because it is calculated according to the product’s importance. So any improvements in products are not taken into consideration.

10. The unemployment rate measures the percentage of the population not working full time.

    **False.** Because
    \[
    \text{Unemployment rate} = \frac{\text{Unemployed}}{\text{Employed} + \text{Unemployed}} \times 100
    \]
    
    Where unemployment rate measures the percentage of working adults looking for jobs, but cannot find one.

11. If the potential output \( Y^* \) exceeds the actual output, then the result is an inflationary gap.

    **False.** Because if there is a recessionary gap where \( Y^* > Y \), there will be some unemployed resources.

12. The recessionary gap causes unemployment and lost output.

    **True.** Because if there is a recessionary gap where \( Y^* > Y \), there will be some unemployed resources, and the economy is operating below its potential level of output.

13. If the money income increases by 50%, and the price level increases by 50% people then real wages also increase

    **False.** Because the rate of growth in real wages =
    \[
    \text{rate of growth in money wages - inflation rate}
    \]
    If both money income and price level increased, by the same percentage, there will be no change in the real wage rates.

14. A rise in the employment or in the labor productivity has the same effect on the GDP.

    **True.** Because if the number of workers rises or the same number of employed workers increase their productivity, the GDP will increase.

15. If real GDP is $300 billion in year 1 and $312 billion in year 2, the growth rate between the two years is 4 percent. **True**
16. People who work part time, but desire to work full time, are considered to be officially unemployed. **False**

17. During periods of rapid inflation, real interest rates may become negative

   **False**, because Real Interest Rate = Nominal Interest Rate - Inflation Rate

If NIR less than inflation rate in booms then real interest rate is negative

18. It could be a trade balance deficit while there is a general equilibrium.

   **True**, because general equilibrium in economy where

   Total injections = total leakages

   I+G+X = S+T+M

   If M>X, then S+T must be < I+G to keep the general equilibrium

19. If GDP deflator for the period 2000-2002 is 120%, this means that the value of output with 2002 prices is $1000 million, when the value of the same output in 2000 prices is $800 million.

   **False**, because

   \[
   \text{GDP deflator} = 100 \times \frac{\text{Nominal GDP}}{\text{Real GDP}} = \frac{1000}{800} \times 100 = 125\%
   \]

20. If the money income increased by 50%, and the price level changed by 50% people would be better off.

   **False**, because The purchasing power of money(Real value of money) = Money Income/price level

21. The recessionary gap causes unemployment and lost in output.

   **True**, because some economic resources are not used and the economy is operating below its potential level

22. There is no difference in effect on GDP if a rise in productivity or employment occurs.

   **True**, because some cuse an increase in GDP.

3. **Assume the following:**

   a. MIT is an autonomous country.
   b. The only good/service produced at MIT is undergrad (freshmen) education.
1. Fill in the previous table
5. Why are your answers in 2, 3 and 4 different/same?
7. Beside GDP deflator what other price indices are used in measuring inflation?
8. Which one is the best? Why?

**Solution:**

How to calculate nominal GDP: nominal GDP \( t = \text{quantity } t \times \text{price } t \) How to calculate real GDP: real GDP \( t = \text{quantity } t \times \text{price base year} \)

<table>
<thead>
<tr>
<th>year</th>
<th># of MIT freshmen</th>
<th>Price (Tuition)</th>
<th>Nominal GDP</th>
<th>Real GDP (2000$)</th>
<th>Real GDP (1950 $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>300</td>
<td>2,000</td>
<td>$600,000</td>
<td>$6,000,000</td>
<td>$600,000</td>
</tr>
<tr>
<td>2000</td>
<td>900</td>
<td>20,000</td>
<td>$18,000,000</td>
<td>$18,000,000</td>
<td>$1,800,000</td>
</tr>
<tr>
<td>2001</td>
<td>1,000</td>
<td>21,000</td>
<td>$21,000,000</td>
<td>$20,000,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>2002</td>
<td>1,100</td>
<td>23,000</td>
<td>$25,300,000</td>
<td>$22,000,000</td>
<td>$2,200,000</td>
</tr>
<tr>
<td>2003</td>
<td>1,000</td>
<td>25,000</td>
<td>$25,000,000</td>
<td>$20,000,000</td>
<td>$2,000,000</td>
</tr>
<tr>
<td>2004</td>
<td>1,200</td>
<td>28,000</td>
<td>$33,600,000</td>
<td>$24,000,000</td>
<td>$2,400,000</td>
</tr>
</tbody>
</table>

How to calculate the growth rate: Growth rate of \( X_t = [(X_t - X_t-1)/X_t-1] \times 100 \)

<table>
<thead>
<tr>
<th>year</th>
<th>Answer (6) GDP Deflator</th>
<th>Inflation Rate( % )</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>105</td>
<td>5</td>
</tr>
<tr>
<td>2002</td>
<td>115</td>
<td>9.5</td>
</tr>
<tr>
<td>2003</td>
<td>120</td>
<td>4.3</td>
</tr>
<tr>
<td>2004</td>
<td>140</td>
<td>16.7</td>
</tr>
</tbody>
</table>

5. Why are your answers in 2, 3 and 4 different/same?

The answer to 2 differs from that of 3 and 4.
Nominal GDP is the sum of quantities of final goods produced times their current price. Therefore, nominal GDP increases over time for 2 reasons.

a. The production of goods increases over time (Quantity goes up)

b. The price of most goods also increase over time (Prices goes up).

Real GDP is constructed as the sum of the quantities of final goods times \(*constant*\) prices. (A base year is chosen). So, it tells us how the quantity of finals goods changes over time. Only the change in quantity affects real GDP.

The answers to 3 and 4 are identical. The base year chosen is sort of like a choice of unit of measurement. For example, whether one measures one’s weight in pounds or kilograms does not affect one’s actual weight. Therefore, the choice of base year, does not affect the growth of real GDP.


\[
\text{GDP deflator} = \frac{N \text{ GDP}_t}{\text{Real GDP}_t} = P_t
\]

\[
\text{Inflation rate} = \frac{P_t - P_{(t-1)}}{P_{(t-1)}} \times 100
\]

7. Besides GDP deflator what other price indices are used in measuring inflation?

**GDP Deflator** = gives the average price of output(the final goods produced in the economy)

**CPI** = Consumer Price Index (Average price of consumption (goods people consume))

**PPI** = Producer Price Index (Prices of domestically produced goods in manufacturing).

8. Which one is the best? Why?

It is hard to say which one is better or more “correct” in measuring inflation. Each index gives us different information. It depends mostly on what you are interested in knowing. If one wants to know how the price level of goods produced in the US is changing, then the GDP deflator would give the most accurate picture. On the other hand, if one was interested in knowing how the price level of consumer goods was changing over time, then CPI would be the best.