AP® Macro Unit 2: Economic Indicators and the Business Cycle

Topic 2.1- The Circular Flow and GDP

1. Define gross domestic product (GDP)
The dollar value of all final goods and services produced within a country's borders in one year.

2. What is the expenditures approach?
The expenditure approach adds up all the spending done in the economy by households, businesses, the government, and other countries.

3. GDP = __C__+__ I__ +__G_+__(X-M)__

4. What is the income approach?
The income approach adds up all the income earned in the economy including wages, rent, interest, and profit

5. National Income = _W_ +__R_+_i_ + _PR_

6. What is the value-added approach?
Calculating GDP by adding up the dollar value added at each stage of the production process

7. The circular flow model shows how households, businesses, and the __government__ interact. Businesses sell __goods/services____ to households in the __product___ market and households sell __resources___ to businesses in the ____resource____ market. Public goods and services are provided by the _government_.

Topic 2.2- Limitations of GDP

1. Identify three types of transactions that are not included in GDP?
-Intermediate goods- GDP includes only final goods (price of finished car, not the radio or tires)
-Non-production transactions or financial transactions. (eg: used goods, stocks, or real estate)
-Non-market activities- (eg: illegal production or illegal labor)

Identify if each statement is true or false

2. On the circular flow model, businesses sell the factors of production to households. False
3. Intermediate goods are used in the production process to produce final goods. True
4. Final goods are included in GDP but services are not counted. False
5. Investment spending is spending on financial assets like stocks and bonds. False
6. Welfare checks and subsides to businesses are examples of transfer payments. True
7. Transfer payments are not counted in the calculation of GDP. True
8. The equation for net exports is imports minus exports. False
9. New housing construction is considered investment and is counted in GDP. True
10. Canada's GDP includes goods produced in other countries by Canadian companies. False

Topic 2.3- Unemployment

Use the info in the chart to identify the following

Total Adult Population	1600
Full-time Workers	600
Part-time Workers	120
Unemployed	80
Discouraged Workers	20

1. Number of workers in labor force 800= 600+120+80
2. Labor force participation rate 50%= 800/1600 x 100
3. Unemployment rate 10% = 80/800 x 100
4. What is the equation for calculating the unemployment rate?

$$\textbf{Unemployment rate} = \frac{\textbf{\# unemployed}}{\textbf{\# in labor force}} \textbf{ X 100}$$

5. Assume that 50 of the 80 unemployed workers also become discouraged workers. Calculate the new unemployment rate. 4% = 30/750 x 100
6. Does the new unemployment rate after the increase in discouraged workers overstate or understate the actual level of joblessness in the economy? Explain. The new unemployment rate understates the level of joblessness. The unemployment rate fell (from 10% to 4%) but the same number people were out of work
7. Why are discouraged workers not included in the unemployment rate? The unemployment rate includes workers with jobs or actively looking for work. Individuals that are not looking for work are not part of the labor force
8. What happens to the unemployment rate when full-time workers involuntarily become part-time workers? Explain. The unemployment rate stays the same. The unemployment rate makes no distinction between full-time or part-time workers

Topic 2.3- Unemployment (continued)

9. Define and give an example of frictional unemployment Workers are temporarily unemployed or between jobs. Individuals are qualified workers with transferable skills but they aren't working. Example: College student entering the labor force

10. Define and give an example of structural unemployment Changes in the structure of the labor force make some skills obsolete. Workers DO NOT have transferable skills and these jobs will never come back. Example: Drivers replaced by self-driving cars

11. Define and give an example of cyclical unemployment Unemployment that results from economic downturns (recessions). As demand for goods and services falls, demand for labor falls and workers are fired. Example: Factory workers laid off when there is a recession

12. What is the natural rate of unemployment?
The NRU is the amount of unemployment that exists when the economy is healthy. It includes both frictional and structural unemployment, but NOT cyclical unemployment

13. Fully explain why "full employment" does not mean 0% unemployment
A healthy economy will always have some frictional and structural unemployment. The economy is at full employment when it only has these two types of unemployment and no cyclical unemployment

Topic 2.4- Price Indices and Inflation

1. What is the Consumer Price Index (CPI)?
It is an index number that shows how prices change over time for a fixed basket of consumer goods

2. Identify the equation for the CPI

$$\text{CPI} = \frac{\text{Price of market basket}}{\text{Price of market basket in base year}} \times 100$$

3. Assume the value of a market basket for a given year is $550 and the same basket in the base year was $500. Calculate the CPI. CPI = 110

4. If the CPI for a given year is 90 then the change in prices between that year and the base year is _-10%_

5. Fill in the blanks. Start with 2009 as the base year then recalculate with 2010 as the base year.

Year	Market Basket	Base Year 2009	Base Year 2010
2009	$20	100	50
2010	$40	200	100
2011	$50	250	125

6. What is the GDP Deflator?
The deflator is an index number that measures all prices and is used to convert nominal GDP into real

7. Identify the equation for the GDP deflator

$$\text{GDP Deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

8. The nominal GDP is $100 billion and the real GDP is $80 billion. Calculate the GDP deflator.
125 (prices are 25% higher since the base year)

9. The Real GDP is $100 billion and the GDP deflator is 200. Calculate the nominal GDP.
200 billion

10. The real GDP is $200 billion and the GDP deflator is 120. Calculate the nominal GDP.
$240 billion

11. The nominal GDP is $300 billion and the GDP deflator is 150. Calculate the real GDP.
$200 billion

12. The nominal GDP is $100 billion and the GDP deflator is 125. Calculate the real GDP.
$80 billion (same as question #1)

Topic 2.5- Costs of Inflation

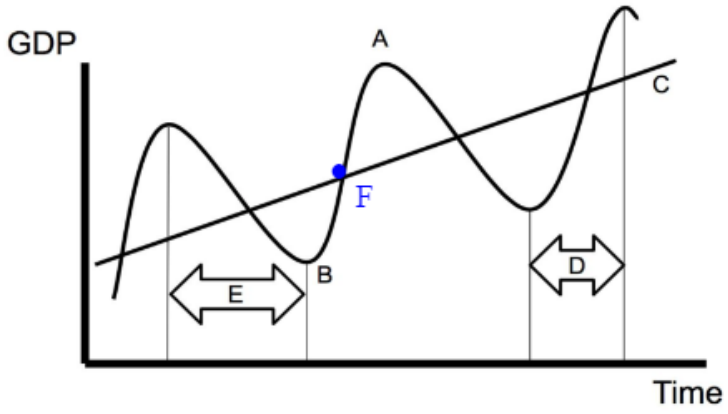
1. Identify who is hurt and helped by unexpected inflation
Lenders (that lend at fixed interest rates) are hurt and borrowers are helped.

Topic 2.6- Real v. Nominal GDP

1. What is the difference between the nominal GDP and the real GDP
Nominal GDP is measured in current prices. It does not account for inflation from year to year. Real GDP is adjusted for inflation and expressed in constant, or unchanging, dollars.

Topic 2.7- Business Cycles

1. Use the graph to identify the following:
   - __C_ Potential Output
   - __A_ Peak
   - __E_ Recession (contraction)
   - __B_ Trough
   - __D_ Expansion (recovery)
2. Which type(s) of unemployment exist when the economy is at point B? All of them. Frictional, structural, cyclical
3. Label a new point (F) where the economy is at the natural rate of unemployment



Identify each of the following on the circular flow diagram for a closed economy:

Consumption	Investment	Public Borrowing
Government Spending	National Income	Public Savings
Factor Payments	Private Borrowing	Resources (2)
Goods/Services (2)	Private Savings	Revenue
		Taxes (2)