

REVIEW QUESTIONS FOR FIRST MIDTERM

CHAPTER 18

1. What does it mean if the gap between a Lorenz curve and the diagonal line gets smaller over time? Explain.

Answer:

The gap between the Lorenz curve and the diagonal line represents the degree of income inequality; the larger the gap the more unequally is the income distributed. If this gap gets smaller over time it is an indication that the degree of income inequality in the country being examined is decreasing.

2. What is the Gini coefficient, and what is it used for? What would a Gini coefficient that was close to zero imply about inequality?

Answer:

The Gini coefficient is a single number that can be used to compare the degree of income inequality among countries, and across different time periods in one country. It is derived from the Lorenz curve by dividing the area between the Lorenz curve and the diagonal line by the area of the triangle below the diagonal. The Gini coefficient takes on values between 0 and 1. A Gini coefficient of zero would indicate perfect equality and a coefficient of one would indicate perfect inequality. The lower the coefficient, the closer income distribution is to being equal.

3. Economists often use a Lorenz curve to describe income distribution. What are two other approaches to the measurement of income distribution?

Answer:

Besides the Lorenz curve, income distribution can be measured according to socioeconomic characteristics (such as race or gender) or according to class (lower, middle, upper).

CHAPTER 24

4. What is the business cycle? How is it linked to a secular trend? Describe the four phases of the business cycle. How are these phases linked to the concepts of a “boom”, a “recession” and an “expansion”?

Answer:

A business cycle is the upward or downward movement of economic activity, or real GDP, that occurs around a long-term secular trend. The four phases of a business cycle are: peak, downturn, trough, and upturn. The top of the cycle is called the peak. A downturn describes when economic activity is falling from the peak. If the decline persists for more than two consecutive quarters it is called a recession. The bottom of the recession is called a trough. An upturn is when economic activity picks up after the trough.

5. Distinguish between Keynesian and Classical economists.

Answer:

On the whole Keynesians generally favor activist macroeconomic policies. Classical economists generally favor laissez-faire or nonactivist policies.

6. What is the difference between the short-run framework and the long-run framework? How does each relate to supply and demand? Explain.

Answer:

Each framework deals with different problems. The long-run framework deals with economic growth issues. The short-run framework deals with business cycles. Both frameworks deal with unemployment and inflation. In addition, each framework emphasizes a different part of the model. The long-run framework focuses on supply; the short-run framework focuses on demand.

7. Assuming that the number of working-age adults is 240 million, the labor force is 160 million, and the total number of employed is 150 million. What is the unemployment rate?

Answer:

Unemployment rate = $(\text{Total unemployed} / \text{labor force}) \times 100 = (10 / 160) \times 100 = 6.25\%$

CHAPTER 25

8. What is the difference between Gross Domestic Product (GDP) and Gross National Product (GNP)? What is the difference between Gross Domestic Product (GDP) and Net Domestic Product (NDP)?

Answer:

Gross Domestic Product measures the aggregate final output produced within the borders of a country during a year. Gross National Product is the aggregate final output produced by the citizens and businesses of a country in a one year period. GNP is equal to GDP plus net foreign factor income, where net foreign factor income is defined as the income from foreign domestic factor sources minus foreign factor income earned domestically.

Because some production is used to replace worn out plant and equipment (depreciation) this production is not available for consumption, investment, or government spending. Net Domestic Product is Gross Domestic Product less depreciation.

9. What is the distinction between gross domestic product (GDP) and net domestic product (NDP)? In theory, which is a superior measure of aggregate output?

Answer:

The difference between GDP and NDP is depreciation. GDP equals consumption expenditure plus gross investment expenditure plus government expenditure, plus net exports $[GDP = C + I + G + (X - M)]$. NDP equals consumption expenditure plus net investment expenditure plus government purchases plus net exports $[NDP = C + (\text{net } I) + G + (X - M)]$. NDP does not include investment to replace depreciated capital.

In principle, NDP is a superior measure of aggregate output. However, there are practical difficulties in measuring depreciation (it is hard to accurately determine the value of a partly worn out machine). The actual adjustment made to calculate NDP is based on the capital consumption allowance, which is an approximation. As a result of these measurement difficulties, GDP is more commonly used in discussions of aggregate output.

10. Determine the amount contributed to GDP from the sale of 200,000 copies of an album. Base your answer on the following information:

The artist receives \$3 per album in royalties.

The producer sells each album to wholesalers for \$10.

Wholesalers sold the album to retailers for an average price of \$12 per album.

Retailers sold 200,000 albums to consumers for \$15 per album.

Demonstrate how the value-added approach equals the final sales approach.

Answer:

The amount contributed to GDP from the sale of the albums is \$3,000,000. The completed table:

Participants	Cost of Materials	Value of Sales	Value added
Artist	\$0	\$600,000	\$600,000
Producer	\$600,000	\$2,000,000	\$1,400,000
Wholesalers	\$2,000,000	\$2,400,000	\$400,000
Retailers	\$2,400,000	\$3,000,000	\$600,000
Totals	\$5,000,000	\$8,000,000	\$3,000,000

The final sales approach is the value of albums sold to consumers—\$3,000,000. This is equal to the value-added approach, \$3,000,000, calculated in the final column.

11. You've been given the following data:

Net non-business interest income	27
Government purchases	600
Gross private investment	500
Depreciation	10
Net exports	-50
Personal consumption	2,500
Foreign factor income earned domestically	320
Income from foreign domestic factor sources	300

On the basis of these data calculate GDP, NDP, and GNP.

Answer:

(1) $GDP = C + I + G + (X - M) = 2,500 + 500 + 600 + (-50) = 3,550.$

(2) $NDP = GDP - \text{Depreciation} = 3,550 - 10 = 3,540.$

(3) $GNP = GDP + \text{Net foreign factor income} = 3,550 + (300 - 320) = 3,530.$

12. Fill in the blanks of the following table and answer the following questions.

Year	Real GDP	Nominal GDP	GDP Deflator
2018	8,144.8	_____	101.9
2019	_____	8,759.9	103.1
2020	8,848.2	9,256.1	_____

(a) Does the table indicate there is inflation? Explain your answer.

(b) What was the percentage change in nominal GDP in 2006 and 2007? Inflation? Real GDP?

Answer:

Year	Real GDP	Nominal GDP	GDP Deflator
2018	8,144.8	8,299.6	101.9
2019	8,496.5	8,759.9	103.1
2020	8,848.2	9,256.1	104.6

(a) There is inflation because the GDP deflator has increased in each year.

(b) See the table below.

Year	Real GDP	Nominal GDP	GDP Deflator
2019	4.32	5.55	1.18
2020	4.14	5.66	1.45

13. Use the table below to answer the following questions.

Real GDP	C
\$500	\$495
510	504
520	513
530	522
540	531
550	540
560	549

(a) What is the size of the multiplier in this economy?

(b) If taxes were zero, government purchases were \$5, investment is \$3, and net exports are zero, what is the equilibrium GDP?

(c) If taxes are \$10, government purchases are \$10, investment is \$6, and net exports are zero, what is the equilibrium GDP?

(a) To find the MPC compare the change in C with the change in GDP to get $9/10$ or 0.9 . The only component of AE is C , therefore the size of multiplier is $1/(1-0.9) = 10$

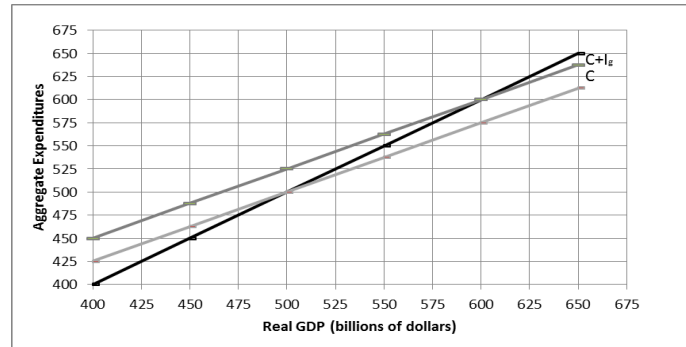
(b) Find the point where aggregate expenditures equal GDP. Aggregate expenditures will include C plus investment and government purchases which together equal \$8. Adding \$8 to C at every level gives an equilibrium GDP of \$530 ($= 522 + 8$).

(c) If taxes are \$10, GDP is reduced by \$10 at every level to result in disposable income. Since the MPC is 0.9 , we can calculate C at every level by reducing each level of C by

\$9 ($.9 \times \10). This will result in aggregate expenditures of \$520 ($504 + 10 + 6$) and an equilibrium GDP of \$520.

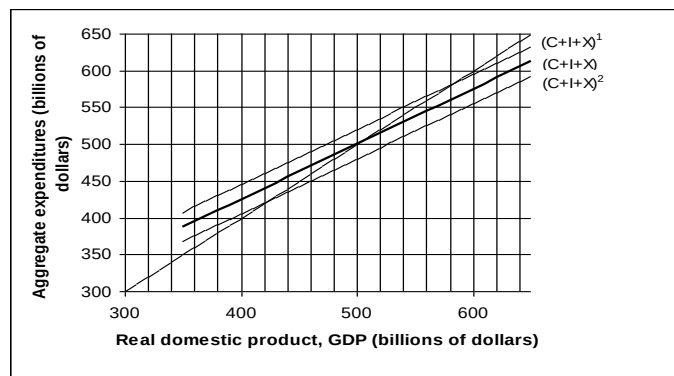
14. Use the graph below to answer the following questions:

- What is the equilibrium GDP?
- Suppose the level of real GDP is \$650 billion. Explain why this may occur.



- \$600 billion. The equilibrium level GDP is the intersection of GDP and $C+I_g$.
- If the economy is operating at a GDP level of \$650 billion planned $C+I_g$ is less than real GDP. This may be a result of unplanned investment by the changes in inventories. If inventories exceed the planned level, producers will want to reduce output. The reverse is also true, if inventories are less than the planned level, then producers will want to expand output. Another possible reason for disequilibrium is if the leakage of savings at a certain level of GDP is not equal to the injection of investment.

15. Use the graph below to explain the relationship between investment and the multiplier. Increases in investment are in \$20 billion shifts. The slope of the aggregate expenditure curve is 0.75.



The graph shows that a small shift in investment, possibly due to a change in expected returns or the interest rate, causes a large shift in GDP. Looking at the graph, a decrease in investment by \$20 billion dollars from $(C+I)$ to $(C+I)^2$ causes a decrease in GDP of \$80 billion. Conversely, an increase in investment from $(C+I)$ to $(C+I)^1$ causes an increase in GDP of \$80 billion (from \$580 billion to \$500 billion). Given that the slope of the aggregate expenditures curve is 0.75, we know that the marginal propensity to spend is 0.75. Using the equation to calculate the multiplier ($1/(1 - \text{Marginal Propensity to Spend})$) we find the multiplier to be 4. We can also find this using our results from the shifts in investment, dividing the change in GDP by the change in investment ($80/20 = 4$).