

Sample Midterm II

Name _____

Id # _____

Instructions: There are two parts to this midterm. Part A consists of multiple choice questions. Please mark the answers to the multiple choice questions on the exam paper and fill in the relevant bubble on the Scantron sheet. Part A is worth 60%. Part B is worth 40% and consists of short answer questions. Please answer in the space provided. Please attempt both parts and turn the exam in at the end.

Part A: MULTIPLE CHOICE (60%)

Choose the one alternative that best completes the statement or answers the question.

- 1) All of the following household expenditures are included in consumption expenditure EXCEPT
- A) purchase of hair styling.
 - B) purchase of corporate stock.
 - C) purchase of a new purse.
 - D) payment to a dentist for filling a tooth.

Answer: B

- 2) GDP equals net domestic product plus
- A) retained earnings.
 - B) depreciation.
 - C) transfer payments and business transfers.
 - D) indirect business taxes and personal taxes.

Answer: B

Corporate profits	\$200
Net interest	150
Indirect taxes less subsidies	230
Depreciation	250
Compensation of employees	1,350
Proprietor's income	150
Rental income	70
Personal consumption expenditures	1,400
Government purchases of goods and services	500
Net exports of goods and services	40

- 3) Using the data in the table above, gross domestic product equals
- A) \$1,940.
 - B) \$2,400.
 - C) \$2,150.
 - D) \$1,920.

Answer: B

- 4) Gross private domestic investment is a component of which approach to measuring GDP?
- A) incomes approach
 - B) output approach
 - C) linking approach
 - D) expenditure approach

Answer: D

- 5) If a worker is temporarily laid off because the economy is in a recession,
- A) cyclical unemployment increases.
 - B) frictional unemployment increases.
 - C) structural unemployment increases.
 - D) the size of the labor force rises.

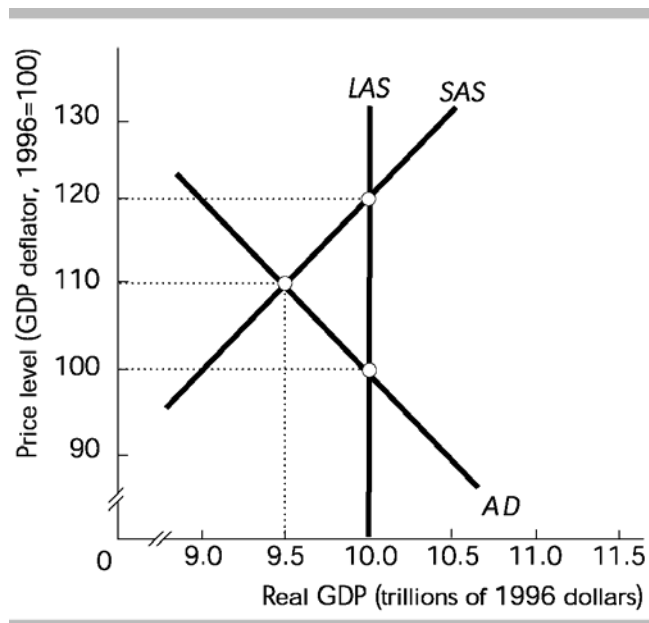
Answer: A

- 6) The duration of time spent by unemployed people looking for jobs
- A) rises during recessions and falls during expansions.
 - B) rises during both recessions and expansions.
 - C) falls during recessions and rises during expansions.
 - D) falls during both recessions and expansions.

Answer: A

- 7) Structural unemployment is
- A) associated with the general decline of specific industries.
 - B) almost always short-term in nature.
 - C) associated with the general downturns in the economy.
 - D) associated with the normal changing of jobs in a dynamic economy.

Answer: A

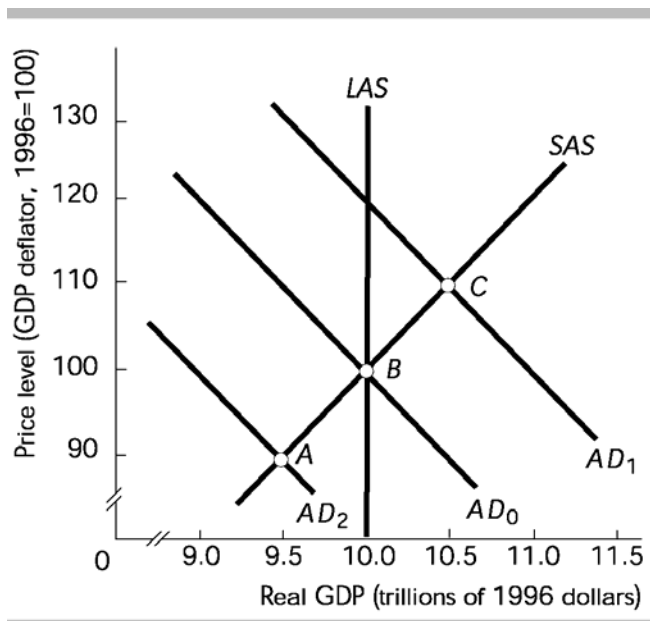


- 8) The above figure illustrates
- A) an equilibrium at the economy's physical limits.
 - B) a recessionary gap.
 - C) an inflationary gap.
 - D) a full-employment equilibrium.

Answer: B

- 9) The marginal propensity to save (*MPS*) is
- A) total saving divided by total consumption expenditure.
 - B) the increase in saving per dollar increase in disposable income.
 - C) the decrease in saving per dollar increase in consumption expenditure.
 - D) the decrease in saving that is caused by inflation.

Answer: B



- 10) In the above figure, point C represents
- A) a recessionary gap.
 - B) an inflationary gap.
 - C) a full-employment equilibrium.
 - D) a decrease in aggregate demand.

Answer: B

- 11) Suppose that nominal GDP per person is \$17,000 in 2002, the 1998 GDP deflator is 100, and the 2002 GDP deflator is 90. The approximate real GDP per person in 2002 is
- A) \$18,889.
 - B) \$17,000.
 - C) \$32,300.
 - D) \$15,300.

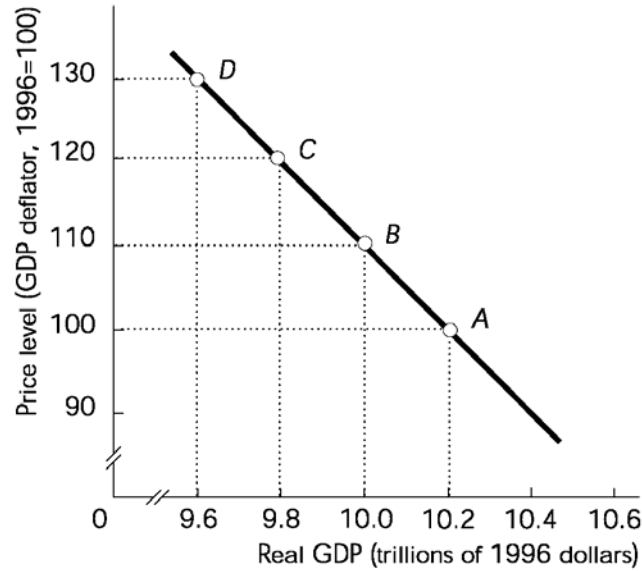
Answer: A

- 12) A consumption function shows a
- A) positive (direct) relationship between consumption expenditure and price level.
 - B) positive (direct) relationship between consumption expenditure and disposable income.
 - C) negative (inverse) relationship between consumption expenditure and disposable income.
 - D) negative (inverse) relationship between consumption expenditure and saving.

Answer: B

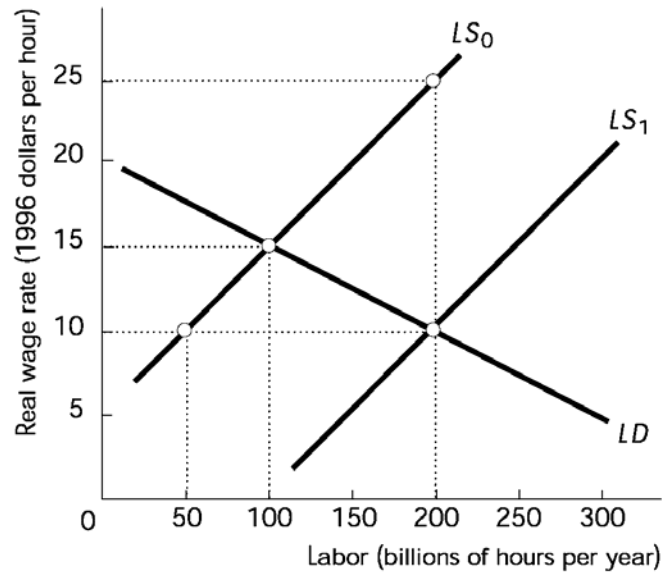
- 13) Real GDP measures the
- A) value of total production linked to prices of a single year.
 - B) general upward drift in prices.
 - C) total profits earned by all businesses valued using prices from a single year.
 - D) changes in the prices of output measured in dollars.

Answer: A



- 14) In the above figure, the economy initially is at point B. Then price level rises by 10. The wealth effect will help
- A) move the economy to point D.
 - B) move the economy to point C.
 - C) keep the economy at point B.
 - D) move the economy to point A.

Answer: B



- 15) In the above figure, which of the following might have shifted the labor supply curve from LS_0 to LS_1 ?
- A) an increase in population
 - B) an increase in technology
 - C) a decrease in the wage rate
 - D) an increase in the wage rate

Answer: A

- 16) If $AE = 150 + 0.6Y$ and $Y = 200$, where Y is real GDP, inventories are
- A) falling 70 below their target.
 - B) falling 30 below their target.
 - C) accumulating 75 above their target.
 - D) accumulating 30 above their target.

Answer: A

- 17) Job leavers are people who
- A) are laid off permanently or temporarily.
 - B) enter the labor force for the first time.
 - C) quit a job to look for something better.
 - D) reenter the labor force after many years.

Answer: C

Disposable income (dollars)	Consumption expenditure (dollars)
100	225
200	300
300	375
400	450
500	525
600	600

- 18) Using the above table, if disposable income is \$400, saving is
- A) \$0.
 - B) \$50.
 - C) -\$50.
 - D) \$100.

Answer: C

- 19) If an increase in a household's disposable income from \$10,000 to \$12,000 boosts its consumption expenditure from \$8,000 to \$9,000, the
- A) slope of the consumption function is 1000.
 - B) household is dissaving.
 - C) slope of the consumption function is 0.2.
 - D) slope of the consumption function is 0.5.

Answer: D

- 20) A rise in the expected future inflation rate
- A) decreases the aggregate quantity demanded.
 - B) decreases aggregate demand.
 - C) increases the aggregate quantity demanded.
 - D) increases aggregate demand.

Answer: D

Part B: SHORT ANSWER QUESTIONS (40%)

Write brief answers to the questions below being as succinct and clear as possible. Show any calculations as necessary in answering the questions.

21. (10%)

a. (5%)

Consider the Aggregate Demand – Aggregate Supply model. Starting from an initial long run equilibrium, show the effects of an increase in government expenditure on equilibrium real GDP, using a graph (or otherwise).

Answer.

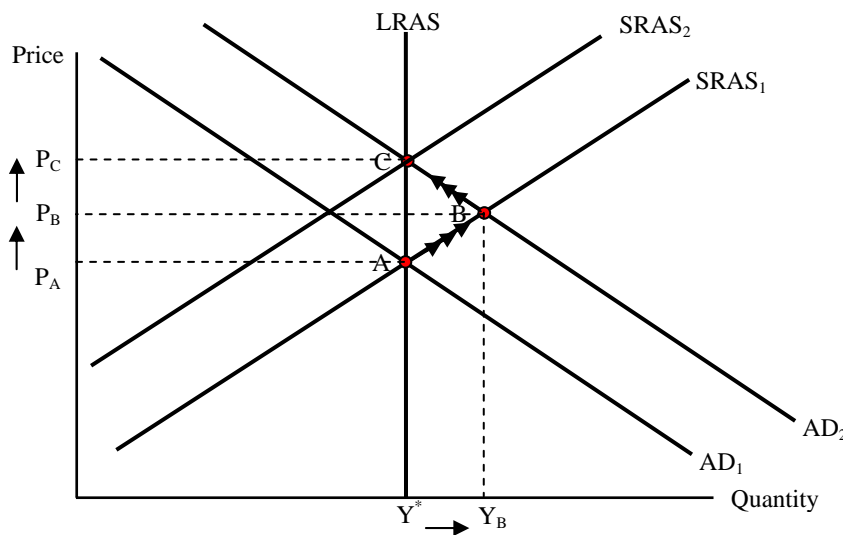


Figure 1

An increase in government expenditure increases aggregate demand. To see this, consider $Y=C+I+G+X-M$. As G increases, aggregate demand, Y increases. Since this is true for each and every price level, so the AD curve shifts from AD_1 to AD_2 in the short run, and we move from A to B. In the long run, the SRAS curve shifts inwards, and we move from B to C.

b. (5%)

In part (a), what happens to equilibrium real GDP in the short run? What happens to real GDP in the long run? Describe the process as the economy moves from the short run to the long run equilibrium.

Answer.

In the short run, equilibrium real GDP increases to Y_B . In the long run, equilibrium real GDP returns to Y^* . This is because prices have increased in the short run from P_A to P_B due to the effects of demand-pull inflation. In the short run, wages

are fixed, and so equilibrium real wages have fallen. In the long run, workers can renegotiate nominal wages, and set them higher. So in the long run, as real wages return to their long run level, marginal costs rise for firms at each and every level of employment, and hence the SRAS curve shifts inwards from B to C until it reaches the intersection of the LRAS and AD_2 curves, at the long run macroeconomic equilibrium.

22. (15%)

Evaluate the following statement: "If firms set prices, and then keep them fixed for a period of time, their fixed prices imply that the aggregate price level is fixed, and that aggregate demand determines the quantity of goods and services sold". Is the statement true or false? Using a graph (or otherwise), explain the reasoning behind your answer.

Answer.

The answer is true. Consider the statement above. If firms set prices and keep them fixed for a period of time, then during that period of time, the SRAS curve is horizontal – at the level of the fixed price. That is, firms are willing to supply whatever amount at the fixed price. Examine figure 2 below:

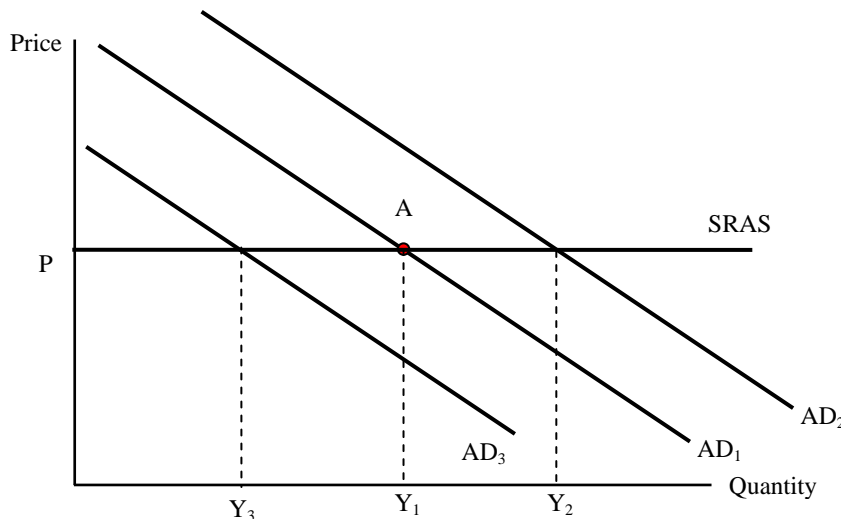


Figure 2

Figure 2 shows that by itself, a horizontal supply curve will not determine the quantity of goods and services sold. It determines the price, P . Changes in the AD curve determine the equilibrium quantity of goods and services. That is if AD is AD_1 then the equilibrium quantity is Y_1 . Similarly, if AD is AD_2 or AD_3 , then the equilibrium quantity is Y_2 or Y_3 respectively.

23. (15%)

The table below shows the components of aggregate planned expenditure in Pirates Cove. The number's are in billions of coconuts, the currency in the cove.

	Y	C	I	G	X	M
a	100	110	50	60	60	15
b	200	170	50	60	60	30
c	300	230	50	60	60	45
d	400	290	50	60	60	60
e	500	350	50	60	60	75
f	600	410	50	60	60	90

In Pirates cove, what is:

a. Autonomous Expenditure?

Answer.

This is the “formal” answer, and the answer can be worked out in simpler ways. Autonomous Expenditure is given by the sum of the autonomous components: $C_0 + I + G + X - M_0 - cT$. Since $T = 0$ here, we need to figure out C_0 and M_0 to be able to work out autonomous expenditure.

Lets start with the C_0 . The consumption function is given by $C = C_0 + cY$ and it is depicted under the consumption schedule in the table above. To work out the slope of the consumption function, c , we need to work out the slope of the consumption function, using any two pair of C and Y points on the schedule, e.g. with $C=110$, $Y=100$ and $C=170$, $Y = 200$.

$$c = \frac{\Delta C}{\Delta Y} = \frac{\Delta C}{\Delta Y} = \frac{170-110}{200-100} = \frac{60}{100} = 0.6$$

This gives us the slope of the consumption function, i.e. $C = C_0 + 0.6Y$. Now, to work out the autonomous component, just simply plug in any of those points to work out the autonomous component, i.e.

$$110 = C_0 + 0.6*100. \text{ So, } C_0 = 110 - 0.6*100 = 110 - 60 = 50.$$

The same thing needs to be done for imports which may have an autonomous component, i.e. the slope of the import function with $M=15$, $Y=100$ and $M=30$, $Y=200$, is:

$$m = \frac{\Delta M}{\Delta Y} = \frac{\Delta M}{\Delta Y} = \frac{30-15}{200-100} = \frac{15}{100} = 0.15$$

Hence, the autonomous component, M_0 is given by: $M=M_0+0.15Y$, i.e. $15=M_0+0.15*100$. Hence, $M_0 = 0$.

So, autonomous expenditure, $C_0 + I + G + X - M_0 = 50+50+60+60 = 220$.

b. The marginal propensity to consume?

Answer:

The marginal propensity to consume was calculated in the previous part as the slope of the consumption function, and it equals 0.6

c. Aggregate planned expenditure when real GDP is 200 billion coconuts?

Answer:

Summing across the components, C, I, G, X and M when Y is 200 Billion, yields:
 $AE = C+I+G+X-M = 170 + 50 + 60 + 60 - 30 = 310$

d. Happening to inventories if real GDP is 200 billion coconuts?

Answer:

Since real GDP is lower than aggregate planned expenditure, there is an unplanned decrease in inventories. Firms will increase production to match expenditure plans.

e. Happening to inventories, if real GDP is 500 billion coconuts?

Answer:

When $Y = 500$, $AE = C+I+G+X-M = 350 + 50 + 60 + 60 - 75 = 445$. Hence real GDP is higher than aggregate planned expenditure, and so there is an unplanned accumulation of inventories. So firms, will decrease production to match planned expenditures.

f. The multiplier in Pirates cove?

Answer:

The multiplier is given by $1/(1-\text{slope of AE})$. Parts (c) – (e) give us two sets of AE and Y points. We can use them to work out the slope. i.e.

$$\text{slope of AE} = \frac{\Delta AE}{\Delta Y} = \frac{445 - 310}{500 - 200} = \frac{135}{300} = 0.45$$

$$\text{Hence the multiplier is } multiplier = \frac{1}{1 - \text{slope of AE}} = \frac{1}{1 - 0.45} = \frac{1}{0.55} = 1.82$$