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Economics 202

## Midterm #1: Questions and Solutions

*Exam Solutions: The multiple choice answers are given in boldfaced print and the short answer question answers are given below each question.*

### Part 1. Multiple Choice Questions (2 pts. per question).

1. Which of the following is a source of market failure:
  - a. situations where equilibrium prices are too high, no matter the reason
  - b. situations where equilibrium output is too low, no matter the reason
  - c. situations where at least some unemployment exists
  - d. free riding, which affects the provision of public goods**
  
2. Opportunity cost is defined as:
  - a. the monetary cost of taking certain actions
  - b. the cost of foregone alternatives**
  - c. the effect of one event on another variables
  - d. the cost associated with having different opportunities
  
3. The assumption of ceteris paribus states:
  - a. hold all "other things" constant**
  - b. quantity demanded will always decrease as price rises
  - c. higher quality leads to higher prices
  - d. consumers will always spend something each period
  
4. Assume that you as you study the demand for specialty beer, a colleague makes the remark that the demand curve for specialty beer should be positively sloped, because higher prices elicit a change in perception about the product and they will buy more units at the higher price. Based on your understanding of the assumptions behind economic models, what assumption did your colleague violate with that statement?
  - a. your colleague used inductive reasoning, rather than deductive reasoning
  - b. the assumption of simplification
  - c. a behavioral assumption
  - d. the fixed point assumption of prediction
  - e. the analytical assumption of ceteris paribus**
  
5. Points located outside a production possibilities curve (PPC) represent:
  - a. efficient production points
  - b. inefficient production points
  - c. points where consumption is possible, but only when using comparative advantage**
  - d. points where consumption is possible, but only when unemployment decreases

6. Points on the PPC that are associated with specialization represent:

- a. **efficient production points**
- b. points involving some unemployment for both goods
- c. points involving unemployment only for one of the goods
- d. inefficient production points

7. How does a PPC embody the concept of opportunity cost?

- a. by showing that it is possible to move inside the curve or that shifts may occur
- b. by showing the maximum amount that can (currently) be produced
- c. **by the fact that the PPC has a negative slope**
- d. by working with only two goods on each graph, rather than three or more different goods

*Questions #8-12 refer to the tables below.*

The tables represent the output for two countries (Zoran and Hyrule) and their production of two goods, bologna and bratwurst.

<b>Zoran</b>	<b>A</b>	<b>B</b>
Quantity of Bologna	5	0
Quantity of Bratwurst	0	2

<b>Hyrule</b>	<b>Y</b>	<b>Z</b>
Quantity of Bologna	8	0
Quantity of Bratwurst	0	4

8. Moving from pt. B to pt. A in Zoran, what is the opportunity cost of producing each additional unit of bologna?

- a. 2 units of bratwurst
- b. **2/5 of a unit of bratwurst**
- c. 5 units of bratwurst
- d. none of the above

9. Moving from pt. Y to pt. Z in Hyrule, what is the opportunity cost of producing each additional unit of bratwurst?

- a. 4 units of bologna
- b. 1/2 of a unit of bologna
- c. 8 units of bologna
- d. **none of the above**

10. Which of the following statements about comparative advantage is true:

- a. there is no comparative advantage for either country
- b. Hyrule has a comparative advantage in both goods
- c. **Zoran has a comparative advantage in bologna, and Hyrule has it in bratwurst**
- d. Zoran has a comparative advantage in bratwurst, and Hyrule has it in bologna

11. If unskilled workers migrate from Hyrule to Zoran, then what must be true:

- a. Hyrule will have higher unemployment than Zoran
- b. Hyrule will have lower unemployment than Zoran
- c. Hyrule's PPC will increase as Zoran's PPC decreases
- d. **Hyrule's PPC will decrease as Zoran's PPC increases**

12. If some workers become temporarily unemployed in Hyrule, then what must be true:

- a. Hyrule will have temporarily higher unemployment than Zoran
- b. Hyrule will have temporarily lower unemployment than Zoran
- c. Hyrule's PPC will decrease (shift in) temporarily
- d. Production will occur temporarily at a point inside Hyrule's PPC**

13. As discussed in class, what is the basic idea behind the Law of Comparative Advantage?

- a. although individuals have unlimited wants, this Law allows those wants to be satisfied
- b. focus on what you're good at, cooperate with others, and it's possible to consume more**
- c. one nation can become more wealthy than other nations by exploiting them
- d. countries are much better off when they limit trade with "low wage nations"
- e. an industry grows faster when it experiences technological change

Questions #14-15 refer to the following situation:

The demand curve for good X (a normal good) has a negative slope, but good X's supply curve is flat (i.e. horizontal). The demand for good X is high, except during the Summer, when the demand for good X decreases.

14. Which of the following is most consistent with this summertime change in demand:

- a. higher production costs
- b. decrease in the number of consumers**
- c. increase in the price of close substitutes
- d. decrease in productivity associated with good X
- e. all of the above

15. If a price ceiling is placed above the equilibrium price of good X, what happens:

- a. the price of good X will decrease
- b. the price of good X will increase
- c. there will be a shortage
- d. there will be a surplus
- e. there will be no change in the quantity supplied of that good**

16. What is the direct effect of playing a price floor above a good's equilibrium price?

- a. there will be no change in the price of that good
- b. there will be an increase in the quantity exchanged of that good
- c. there will be a shortage
- d. there will be surplus**
- e. there will be no change in the quantity supplied of that good

17. What is the relationship between a good's equilibrium price and its demand?

- a. increases in demand cause an increase the equilibrium price**
- b. decreases in a good's equilibrium price cause an increase in demand
- c. increases in a good's equilibrium price cause an increase in demand
- d. increases in a good's equilibrium price cause a decrease in demand
- e. all of the above

18. Higher production costs have what effect on the typical market?

- a. higher prices and fewer units sold**
- b. higher prices and more units sold
- c. lower prices and fewer units sold
- d. lower prices and more units sold

19. Assume that slacker students spend their study time either renting and then watching DVDs on their computer or renting and then playing video games. If most everyone is similar to this, then what effect does a decrease in the rental price of DVDs have on the market for video games?

- a. increase in the demand for video games
- b. decrease in the demand for video games**
- c. increase in the demand and supply of video games
- d. decrease in the demand and supply of video games

20. What is heavy advertising designed to accomplish in most markets?

- a. increase demand through changes in consumer preferences**
- b. increase demand and supply together, both through changes in consumer preferences
- c. lower costs, which decreases supply and makes each firm more competitive
- d. both a and b are correct

21. Demand pull inflation can occur as the result of:

- a. sharp increases in consumer debt**
- b. increases in productivity
- c. sharp increases in the supply of available labor
- d. an increase in the number of suppliers

Questions #22-24 concern the following situation.

In 1999, the Government calculated the following CPIs for each of these cities:

San Francisco, CA	168.3	Houston, TX	147.1
New York, NY	172.1	Philadelphia, PA	171.9
Los Angeles, CA	158.9	Detroit, MI	158.3

22. What city offers the highest real income for someone earning \$35,000 in nominal income?

- a. San Francisco
- b. Houston**
- c. New York
- d. Los Angeles
- e. Detroit

23. If your nominal income in both the base year and 1999 within the New York area was \$40,000, then what was the change in your real income between the base year and 1999?

- a. decrease in real income of \$17,000**
- b. decrease in real income of \$29,000
- c. no change in real income
- d. increase in real income of \$10,000
- e. unable to calculate without being given the base year CPI

24. If you're offered \$40,000 in Philadelphia, then which (if any) of the following alternative offers provide you with greater purchasing power:

- a. \$40,000 in New York
- b. \$36,000 in Houston**
- c. \$39,000 in San Francisco
- d. \$35,000 in Los Angeles
- e. none of the above

25. What do quantities purchased (for each good) reflect in the CPI?

- a. quantities are used to more easily calculate the CPI inflation rate
- b. quantities help us see whether there are increases in quality over different years
- c. the quantity purchased tells us whether consumer prices are constant in different years
- d. quantities serve as "weights", telling us the relative importance of each good in the CPI**

26. What is disinflation?

- a. an increase in the price level
- b. a decrease in the price level
- c. a decrease in the inflation rate over time**
- d. an increase in the inflation rate over time
- e. a very high inflation rate (e.g. greater than 1000% per year)

27. How do you calculate the national income accounting measure called National Income?

- a. Gross Domestic Product (GDP) minus Depreciation
- b. Net Domestic Product minus Depreciation
- c. Net Domestic Product minus Indirect Business Taxes**
- d. Personal Income minus Indirect Business Taxes

28. Rising real GDP is not good to use as the sole measure of social welfare (i.e. whether we, as a society, are "better off") for each of the following reasons **except**:

- a. real GDP increases when we replace infrastructure that has been destroyed in a natural disaster, which is not consistent with the idea that we're all better off
- b. higher real GDP is typically accompanied by a higher level of pollution, and if the increase in pollution is large, then we may not be better off at all
- c. real GDP is an overall measure of income, so we don't know if *every* person is better off
- d. higher real GDP is always accompanied by increases in the price level, and not everyone benefits from greater inflation**

29. By definition, what is an indirect business tax?

- a. any tax on the resources a firm will buy, which is placed at an earlier stage of production
- b. a tax that is not levied directly on profits**
- c. taxes on imported goods
- d. taxes placed on services, but not on physical goods
- e. a profit tax (e.g. for firms earning what the government considers excessive profit)

30. Which of the following statements is closest to describing the true difference between nominal and real GDP:

- a. nominal GDP is measured in current dollars, real GDP is measured in constant dollars**
- b. nominal GDP includes goods produced only within our borders, real GDP includes all goods, no matter where they are produced
- c. nominal GDP excludes inflation from the calculation of GDP, real GDP includes inflation
- d. nominal GDP is a true measure of purchasing power, real GDP is not

31. In terms of each good's relative importance within the CPI, which general item (below) is given the greatest weight:

- a. education-related goods
- b. communication-related goods
- c. transportation-related goods
- d. medical care
- e. housing**

32. When the government measures unemployment how do they define it?

- a. any person who is not employed, but is actively seeking employment**
- b. any person who does not have full-time employment
- c. any person who is not employed
- d. any person without full-time employment
- e. any person who is laid off from their job

33. If people go from being officially unemployed to becoming a "discouraged worker", then:

- a. the unemployment rate remains the same
- b. the unemployment rate increases
- c. the unemployment rate decreases**
- d. the unemployment rate will increase or decrease, depending on whether this change is voluntary or involuntary

34. Which of the following would go directly into the calculation of this year's GDP

- a. my expenditure on paint and paint materials when I paint my room and don't hire someone else to do it**
- b. the expenditure I make buying raw materials that go into the production of something else
- c. the expenditure I make buying used goods at the consignment shop (i.e. used clothing store)
- d. the expenditure I make buying goods within the underground economy (of course, for my kids)
- e. my purchase of stock from someone else that is selling the stock from their portfolio

35. As described in class, what problem is avoided by counting only final goods and services in GDP, rather than the total sale of all goods and services produced in a given period?

- a. the low demand problem
- b. the inflationary change problem
- c. the ceteris paribus problem
- d. the double counting problem**
- e. the resource allocation problem

The table below corresponds with Questions #36-38.

	<u>June 1999</u> <u>Unemployment rate</u>	<u>June 1999</u> <u>Labor force</u>
Bowling Green	1.9%	25,424
Covington	3.1%	20,555
Lexington	2.1%	262,781
Louisville	4.2%	577,788
Owensboro	5.9%	51,628

36. According to the table above, how many people in Louisville were officially unemployed in June 1999?

- a. 12,135
- b. 24,267**
- c. 137,569
- d. 553,520
- e. not enough information is given to answer this question

37. If the natural rate of unemployment in Owensboro is 5%, then how many people in Owensboro were involuntarily unemployed in June 1999?

- a. 465**
- b. 517
- c. 2,581
- d. 3,046
- e. not enough information is given to answer this question

38. In 1999, between February and June, Bowling Green's unemployment rate decreased from 2.5% to 1.9%. Holding everything else constant, this decrease implies that more unemployed people became employed, but only if which of the following also occurred:

- a. discouraged workers accepted jobs
- b. the participation rate decreased
- c. the participation rate did not change**
- d. part-time workers become full-time workers

39. Which of the following is most likely to cause an increase in cyclical unemployment?

- a. after any technological change that causes workers to become unemployed
- b. when the minimum wage is increased during the business cycle
- c. after workers voluntarily quit their existing jobs
- d. any period where aggregate demand is decreasing**

40. How do we measure the civilian participation rate?

- a. multiply the labor force by the civilian unemployment rate
- b. divide the labor force by the civilian unemployment rate
- c. divide the labor force by the noninstitutionalized civilian population that is 16 yrs or older**
- d. divide the civilian noninstitutional labor force over 16 by the entire population
- e. divide those without jobs, but looking for employment, by the noninstitutional population over 16

**Part 2. Short Answer Questions (20 points possible in this section)**

*Questions #1-4 consider the PPC relationship in Country A for tractors and automobiles. You may use graphs as part of your explanation or just explain without a graph.*

**[3 pts]** 1. *How does an increase in the demand for tractors affect the PPC of Country A? (assume full employment throughout this change)*

There is no shift in the PPC, simply movement from point to point along the curve, toward tractors and away from automobiles.

**[3 pts]** 2. *How does a decrease in the productivity of tractor company employees (only) affect the PPC of Country A?*

There is an inward shift in the curve, but only for one tractors. The shift (decrease) shows lower levels of tractor production for every unit of automobile produced, until you get to the point where you would be specializing in automobiles. We also refer to this as a pivot, where all points but the intercept point on the automobiles axis will shift inward.

**[3 pts]** 3. *How does technological change within (only) the automobile industry affect the PPC of Country A?*

There is an outward shift in the curve, but only for one good (automobiles). The shift (increase) shows higher levels of potential in automobile production for each unit of tractor produced, until you get to the point where only tractors are produced. Again, we refer to this as a pivot, and in this case, a pivot outward for automobiles.

**[3 pts]** 4. *How would relaxed migration policy, which leads to an increase in migration into Country A, affect the PPC of Country A?*

There is an outward shift in the curve for both automobiles and tractors. More factors implies a greater potential, but for both goods.



## **Part 2. Short Answer Questions cont.**

*Note that Question #5 relates to the Country A mentioned in Questions #1-4 above.*

**[4 pts]** 5. *Assume that Country A is the least efficient automobile producer in the world (i.e. high opportunity cost), but that consumers in Country A want at least some automobiles. How does the Law of Comparative Advantage allow Country A to increase their consumption of automobiles without sacrificing their consumption of tractors or by forcing Country A to produce something it's not very good at producing?*

From the sound of this situation, it would appear that Country A has a comparative advantage in producing tractors. This would be true if their opportunity cost of producing tractors is lower than that of other countries. According to the Law of Comparative Advantage, once Country A finds a country with a comparative advantage in producing automobiles, not tractors, then each country should specialize in producing the good where they have that comparative advantage.

After specializing, both countries can trade amongst themselves. This allows each country to consume at a point located outside of their PPC and make it possible for Country A to consume more of both tractors and automobiles.

**[4 pts]** 6. *Suppose you're the manager of some rural bank (the only bank in the area), and you know that inflation is coming. What would you do with the interest rates you charge on fixed rate loans? Explain.*

When it comes to loans, the bank is a creditor (i.e., a lender). Borrowers are always better off with inflation and creditors worse off, because inflation erodes the value or purchasing power of the money to be repaid. As a creditor, the bank would have an incentive to raise interest rates, so that when borrowers pay back their loans, this money will have the same "real value" or purchasing power as before the inflation.