

ECO 150, Winter 2022, Practice Exam #3

Name:

Key

Instructions:

1. This exam consists of thirteen questions and a bonus. Answer them all (5 points on the bonus is the same as 5 points on another question). You are encouraged to use the models from class when formulating your answers.
2. Some questions are open ended. You will be graded more on the quality of your explanation than your specific answers. On “true/false” questions, for example, answering only “true” or “false” will receive no credit, even if correct.
3. Do not just copy from the course materials. Doing so will receive no credit.
4. This is an open note exam. You may use your notes, the textbook, and all course materials from the website. These must be printed. **No electronic devices may be used.** Feel free to leave answers as fractions when computing GDP, unemployment, or inflation.

Please sign the following statement:

In completing this exam, I did not communicate with any other student or person about this exam.
I understand that doing so would be a violation of the Student Conduct Policy.

Sign:

Printed Name:

1. Is eliminating all market failures a realistic goal of macroeconomic policy?

No. Actual policy making encounters all sorts of externalities, public goods, imperfect competition, etc. It is not possible to remedy all of them. Furthermore, fixing market failures likely requires distortionary taxation which is itself a market failure.

2. True or False? Higher inflation and higher GDP both always increase social welfare.

False. Neither GDP nor inflation is welfare. A policy can hypothetically have any impact on inflation/GDP, but bring other benefits that make it desirable.

For questions #3-4, consider the following data:

Table 1: Labor Market for Rugtopia

Group	# of People
Full Time Employed	250
Unemployed, Actively Seeking Work	50
Children	100
Underemployed for Economic Reasons	50
Retirees	100

3. Calculate the employment to population ratio and U-3 unemployment rate.

Civilian, adult, non-incarcerated population =

450 (no kids)

$$EPR = \frac{250}{450} = 55.6\%$$

$$U-3 = \frac{50}{250 + 50} = \frac{1}{6}$$

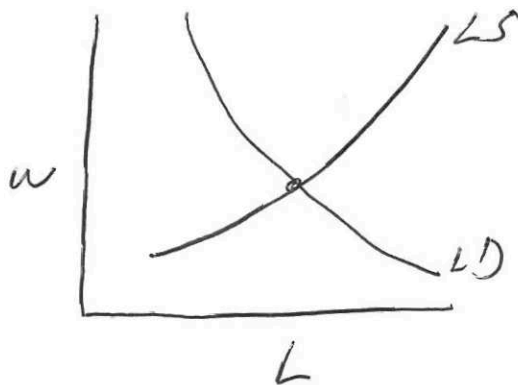


4. What would happen to unemployment if ~~all~~ 25 unemployed workers (actively seeking work) become employed?

$$U-3 = \frac{25}{300} = \frac{1}{12}$$

5. If wages are flexible, how will a decrease in labor demand affect involuntary unemployment?

If wages are flexible, then there is no involuntary unemployment. The labor market is at the intersection of labor supply and labor demand.



6. Do decreases in imports reduce GDP?

No. Imports do not appear in GDP. Although they are subtracted in the national income accounting identity ($Y = C + I + G + EX - IM$), they also count in C , I , or G .

For Questions #7-8 use the following data:

Table 2: Good and Services Purchased in 2021-22

Good or Service	Quantity (21)	Price (22) (\$)	Quantity (21)	Price (22) (\$)
Black Market Weed	1	2	1	5
Imported Metal	3	4	3	30
Tax Services	1	4	2	3
Aspirin	3	1	4	2
New Housing	7	2	6	4

7. Calculate real GDP growth in 2022. Use 2022 as the base year.

$$GDP_{2021} = 3 \times 1 + 2 \times 3 + 4 \times 7 = 37$$

$$GDP_{2022} = 3 \times 2 + 2 \times 4 + 4 \times 6 = 38$$

$$GDP \text{ growth} = \frac{1}{37}$$

8. Using 2022 as the base year, calculate inflation using the GDP Deflator as your price index.

$$P_{2021} = 2 \times 4 + 4 \times 1 + 6 \times 2 = 24$$

$$P_{2022} = 3 \times 2 + 2 \times 4 + 4 \times 6 = 38$$

$$\pi_{2022} = \frac{38 - 24}{24}$$



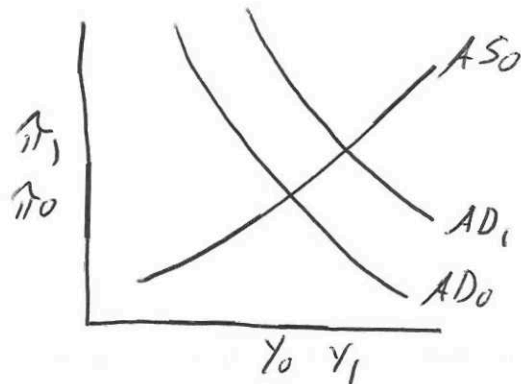
9. Why do economists pay more attention to the growth rate of the price level instead of the price level itself?

The price level is the cost itself of the bundle of goods. Unless one knows what is in it, the price level is meaningless. Furthermore, the social costs of inflation depend on changes to the price level, not the price level.



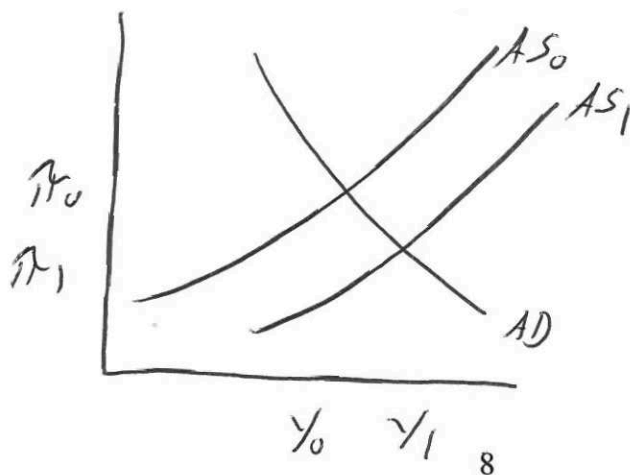
10. Why might a Central Bank cut interest rates as a way to boost short-term economic performance?

Lower interest rates make it easier for households and firms to finance consumption and investment. They thus boost aggregate demand.



11. Using the AD/AS model, show how a more productive workforce might improve aggregate output.

A more productive work force causes aggregate supply to shift right because firms produce more output at any price level.



12. How did Malthus explain the lack of economic growth through most of human history?

According to Malthus, any production above subsistence was converted into faster population growth. This higher population then brought GDP back down to subsistence levels.

13. What is the difference between education and human capital and how do they affect long-run economic performance?

Education is a major component of human capital. Human capital includes other things, however, such as worker health, experience, etc.

Higher human capital leads to better long-run economic performance.

Bonus: Suppose that the Fed lowers interest rates and Congress raises taxes. What will the effect on aggregate output and inflation be?

It is ambiguous. Higher taxes lower aggregate demand. Lower interest rates boost aggregate demand. If the former dominates, output and inflation fall. If the latter dominates, output and inflation rise.