

Final Exam

General Instructions:

This exam is closed book and closed notes. The time limit is 120 minutes. Please read each question carefully before answering. If you are confused about a question please ask me to clarify it before answering. Be as specific as possible when answering questions. Make sure to label all graphs! Total points = 160. Relax, don't stress and good luck!

I. Definitions (30 points total, 5 points each). Please define 6 of the following 8 terms:

- (a) Stabilization policy
- (b) Phillips curve
- (c) Okun's law
- (d) Sacrifice ratio
- (e) Efficiency wage
- (f) Keynesian short-run aggregate supply curve
- (g) Temporary shock vs. permanent shock
- (h) Keynesian full employment line

II. Historical Question (20 points total).

1. Briefly describe two recessions (for the U.S. economy) over the last 30 years. That is, give the approximate dates of the recessions, the causes or catalysts of the recessions and the relevant business cycle facts (e.g. approximate values of important economic variables like GNP growth, unemployment, inflation, interest rates, money supply etc.)
2. What are the primary causes of business cycles in the Keynesian model? That is, what kind of "shocks" are responsible for recessions and booms in the Keynesian model? Give an example of such a shock and relate it to a particular recession.

III. Short Answer (40 points total)

1. (20 points) Keynesian economists generally feel that the costs associated with high levels of unemployment are worse than the costs associated with high levels of inflation whereas classical economists believe that the reverse is generally true.
 - (a) What are the primary costs of unemployment? (Hint: you may want to distinguish between different types of unemployment)
 - (b) What are the primary costs of inflation? (Hint: not all periods of inflation are alike!)
2. (20 points) Keynesian theory is based on the premise of sticky wages and prices over the business

cycle. Briefly explain some the economic reasons for this wage and price stickiness.

IV. Business cycle analysis with the classical model (30 points total)

The following questions are based on the classical model with misperceptions.

Suppose the economy is operating at a fairly high rate of inflation and that the Fed decides to reduce the inflation rate by restricting the growth of the money supply.

1. Starting from the initial equilibrium, suppose the Fed unexpectedly decreases the money supply by 10%. Describe what happens to the following variables both in the short-run and in the long-run (10 points):

- (i) output (Y)
- (ii) employment (N)
- (iii) expected real interest rate (r)
- (iv) price level (P)
- (v) real wages (W/P)
- (vi) real balances (M/P)
- (vii) productivity (A)
- (viii) saving (S)
- (ix) investment (I)

2. Starting from the initial equilibrium, suppose instead that the Fed announces to the public that it is going to follow an anti-inflationary policy and then decreases the money supply by 10%. Describe what happens to the following variables both in the short-run and in the long-run (10 points) :

- (i) output (Y)
- (ii) employment (N)
- (iii) expected real interest rate (r)
- (iv) price level (P)
- (v) real wages (W/P)
- (vi) real balances (M/P)
- (vii) productivity (A)
- (viii) saving (S)
- (ix) investment (I)

3. What does your analysis of the above two cases have to say about the tradeoff between

inflation and unemployment as embodied in the expectations augmented Phillips curve?
(10 points)

V. Business cycle analysis with the Keynesian model (40 points total)

The following questions are based on the Keynesian AD/AS curves below.

The above graphs depict the economy during a typical Keynesian recession: actual output is below potential, unemployment is high etc.

1. Describe how the government's use of expansionary fiscal policy (say, an increase in government spending) helps the economy recover from the recession. That is, indicate the changes in the following variables due to the increase in government spending (G): (15 points)

- | | |
|---------------------------------------|---------------------------|
| (i) output (Y) | (vi) real balances (M/P) |
| (ii) employment (N) | (vii) budget deficit (BD) |
| (iii) expected real interest rate (r) | (viii) saving (S) |
| (iv) price level (P) | (ix) investment (I) |
| (v) real wages (W/P) | |

2. Describe how the Fed's use of expansionary monetary policy (an increase in the money supply) helps the economy recover from the recession. That is, indicate the changes in the following variables due to the increase in M: (15 points)

- | | |
|---------------------------------------|---------------------------|
| (i) output (Y) | (vi) real balances (M/P) |
| (ii) employment (N) | (vii) budget deficit (BD) |
| (iii) expected real interest rate (r) | (viii) saving (S) |
| (iv) price level (P) | (ix) investment (I) |
| (v) real wages (W/P) | |

3. Classical economists often argue against such active stabilization policies by the government or the Federal Reserve during recessions. Why? (10 points)