

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

- 1) (15 points) Explain $\Delta Y/Y = 3 - 2\Delta u$. You can treat $\Delta Y/Y$ as one variable after you explain what it is. Also explain what the 3 means and why that occurs, and why the 2 is not 1.
- 2) (35 points) Draw the production function with labor on the axis and the supply and demand for labor diagram. Illustrate the effects of an improvement in technology. Explain why the curves moved as drawn. What happens to the amount of labor hired, the real wage, and the real GDP? State how you found each.
- 3) (5 points) Recently, the government announced that the unemployment rate went up and stated that it was a good sign, even though the unemployment rate was not too low. Explain why it is good that the unemployment rate went up.
- 4) (10 points each) For each of the following, determine what happens to the unemployment rate and the labor force participation rate. Explain your logic. Which type of unemployment is affected? Explain why you chose that.
 - A) Lots of coal miners were laid off during the past year.
 - B) A stay-at-home dad starts to look for a job.
 - C) A lot of people were laid off in 2009.
- 5) (15 points) Explain why the labor supply diagram is nearly vertical. Which effect is stronger? Explain how your graph in #2 shows that effect is stronger.