

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) To retire and keep your standard of living, you need to save 20 times your annual income. Suppose your retirement fund earns 6% interest and if you earn \$50,000/year. If you save for 40 years, you need to save \$502.14/month. If you save for 30 years, you need to save \$1070.05/month. There are two reasons why the extra 10 years greatly reduces how much you have to save. What are the two reasons? Explain your logic. (Note that this means you should start saving for retirement today.)
  
- 2) (15 points each) How does economic growth lead to the following? Explain your logic and put your answers in separate paragraphs.
  - A) Urban congestion
  - B) Environmental degradation
  
- 3) (15 points each) How does economic growth lead to the following? Explain your logic and put your answers in separate paragraphs.
  - A) Political stability
  - B) Reduction in illiteracy
  
- 4) (25 points) What is a patent? If the length of time that patents lasted was increased, then what would be the good effect and what would be the bad effect. Explain how both are caused.