

Department of Humanities and Social Sciences, IIT Madras  
HS3002 Principles of Economics:  
Mid Semester: 30 Marks  
23 September 2014 (5pm to 615pm)

NOTE: Answer all questions.

**WRITE YOUR INSTRUCTOR'S NAME ON TOP OF YOUR ANSWER SHEET**

1. Classify each of the following statements as positive or normative: (i) The government should increase the rate of inflation in order to reduce the rate of unemployment; (ii) There is a short-run trade-off between inflation and unemployment; (iii) Price of the new Honda Amaze car is too high; and (iv) The government should increase taxes to pay for universal health care. (2 marks)

2. Evaluate the following statements. Do you agree? Why or why not?

- a. "Market equilibrium maximizes economic well-being of a society."  
b. "A tax that has no deadweight loss cannot raise any revenue for the government."

(3 + 2 = 5 marks)

3. Suppose that a market is described by the following supply and demand equations:

$$Q^S = 2P$$

$$Q^D = 300 - P$$

- a. If a tax of  $T$  is placed on buyers, what happens to the price received by sellers, price paid by buyers, and the quantity sold?  
b. Use your answer to part (a) to solve for the tax revenue as a function of  $T$ . Graph this relationship for  $T$  between 0 and 300.  
c. Solve for deadweight loss as a function of  $T$ . Graph this relationship for  $T$  between 0 and 300.  
d. The government now levies a tax on this good of \$200 per unit. Is this a good policy? Why or why not? Can you propose a better policy?


(1+1+2+3 = 7 marks)

4. Suppose that in a year an Indian worker can produce 200 pillows or 30 televisions, while a Bangladeshi worker can produce 200 pillows or 18 televisions.
- (a) Graph the production possibilities frontier for each of the two countries.
- (b) If these countries were open to trade, which country would export pillows?
- (c) Explain the range of the price of a television (in terms of pillows) for which the two countries might trade.  $(1+1=2)$

5. "If trade is good for a country, it must be good for everyone in the country": Do you agree with the statement? Explain your answer.  $(2)$

6. Explain the effect on market price and quantity in the market for mobile phone handsets of each of the following:

- (a) Consumers income rise
- (b) Technical improvements reduce production costs
- (c) The price of land- line calls falls sharply.  $(1+1+1= 3 \text{ marks})$

7. Assume that demand for a product is inelastic; will spending by consumer's go on increasing as price rises? Would there be any limit?   $(2)$

8. Why are snacks and drinks much more expensive in airports and cinema theatres than in normal restaurants even though they may cost a similar amount to produce?  $(2)$

9. Consider a small country that exports steel. Suppose that a pro-trade government decides to subsidize the export of steel by paying a certain amount for each ton sold abroad. (a) How does this export subsidy affect the domestic price of steel, quantity of steel produced, the quantity of steel consumed and the quantity of steel exported? (b) How does it affect the consumer surplus, producer surplus and government revenue and total surplus?  $(2 + 2 = 4 \text{ marks})$