

Indian Statistical Institute, Bangalore

B. Math (Hons.) III Year

First Semester - Economics I

Mid Term Exam

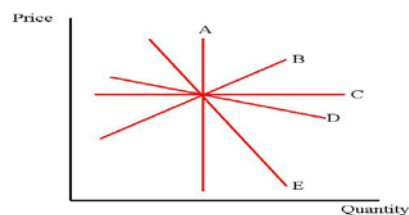
Duration - 3 Hrs.

Total marks - 40

Date: 11th September 2015

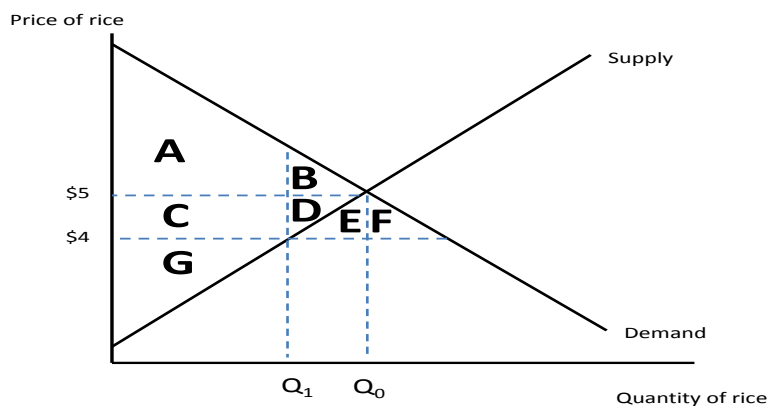
Each question (part) carries one mark unless specified otherwise. Answer all questions.

1. Which one of the following goods is most likely to have a price inelastic demand and Why?
 - a) House plants
 - b) Cigarettes
 - c) Beef
 - d) Novels
 - e) Manicures
2. If the demand for coffee beans is inelastic, then a rise in the price of those beans will cause the coffee farmers' total revenues to ...
 - a) rise.
 - b) fall.
 - c) stay the same.
 - d) fluctuate wildly, driving farmers into bankruptcy.
 - e) none of these.
3. Suppose we know that the price elasticity of demand for organic carrots is 1.5. If a grocer decreases the price of organic carrots by 12%, what would we expect to happen to the quantity of organic carrots purchased?
 - a) Decrease by 18%
 - b) Decrease by 6%
 - c) Increase by 6%
 - d) Increase by 8%
 - e) Increase by 18%
4. Suppose we know that the price elasticity of demand for sandals is 1.4. A shoe stores normally sells 100 pairs of sandals each month. If it decides to raise the price of its sandals by 10%, how many sandals would it then sell per month?
 - a) 114
 - b) 99
 - c) 90
 - d) 86
 - e) 72
5. In the graph below, which line represents a demand curve that is perfectly inelastic? Which line represents a demand curve that is relatively, but not perfectly, elastic? Which line represents a demand curve that is perfectly elastic? Which line represents a demand curve that is relatively, but not perfectly, inelastic? [2]

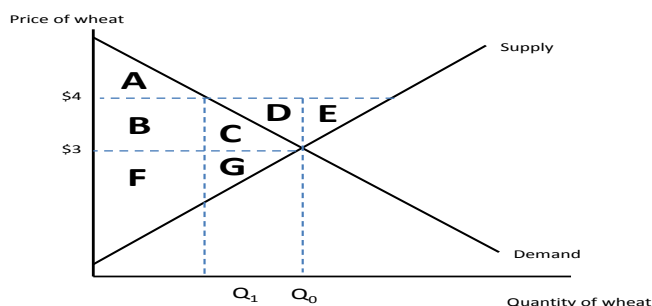


6. If the supply of salt is perfectly inelastic, and the demand for salt increases, then how will equilibrium price and quantity change?
7. Suppose the price of gasoline increases. The substitution effect means that ...
 - a) people will purchase less gasoline.
 - b) people will purchase less of all normal goods.
 - c) people will purchase more bikes and bus tokens.
 - d) people will use highways less often.
 - e) people will purchase more of inferior goods.
8. What will happen to short run and long demand elasticity when the price of gasoline increases steeply?
9. Suppose that the price elasticity of demand for iPads is 1.0. If Apple increases the price of iPads by 50%, then its revenues will...
10. If potatoes are a Giffen good, then...
 - a. potatoes are also a normal good.
 - b. potatoes are also a luxury good.
 - c. an increase in the price of potatoes will increase the quantity demanded.
 - d. there will always be a surplus of potatoes.
 - e. potatoes must make up a small portion of consumers' total expenditures.
11. In the graph below
 - (a) Suppose the government of a developing country mandates that the price of rice can be no higher than \$4 per bag. This is an example of ...
 - (b) The reduction in social welfare as a result of this policy (relative to the unregulated market equilibrium) is equal to ...
 - (c) Consumer surplus after the policy is implemented would be equal to ...

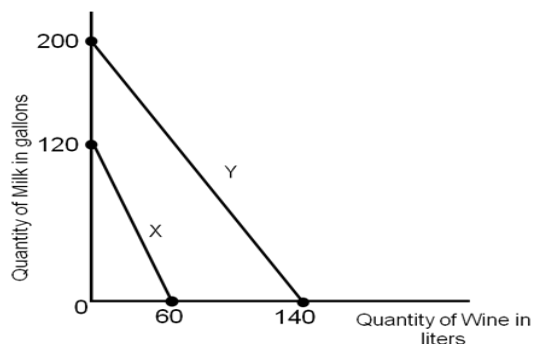
[3]



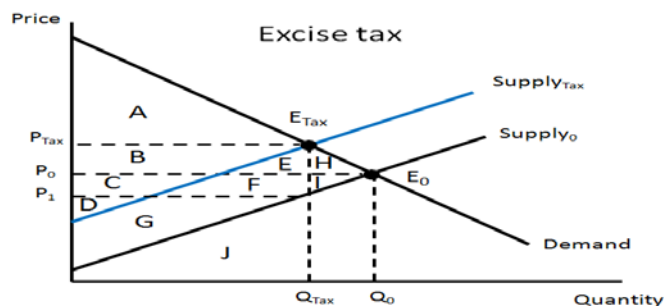
12. In the graph below, suppose the government mandates that the price of wheat can be no lower than \$4 per bushel. Which area is the deadweight loss? What area(s) represent the producer surplus after the implementation of this policy? [2]



13. There is debate among economists about whether minimum wage hikes are good for workers. Based on welfare analysis, indicate when raising the minimum wage is most likely to increase workers' surplus. [2]
14. Refer to the figure below that shows the production-possibilities frontier of countries X and Y. The points on each axis represent the maximum quantities that each country could produce if they specialized entirely in one good or the other. What is the opportunity cost of producing one gallon of milk in country X? Which country has a comparative advantage at producing wine? What should country X specialize in if it follows comparative advantage? [3]



15. The graph below illustrates a market with an excise tax. The amount of the per-unit excise tax is equal to Total tax revenues are equal to... The reduction in consumer surplus as a result of the excise tax is equal to... The reduction in producer surplus as a result of the excise tax is equal to... [3]



16. Explain what happens when a monopolist engages in price discrimination. [3]

17. The table describes the cost structure of a flashlight producer. [4]

Quantity of Flashlights	Fixed Cost (\$)	Variable Cost (\$)			
0	20				
1	20	15			
2	20	25			
3	20	37			
4	20	52			

- a) What is the total cost of producing 3 flashlights?
- b) How much more does it cost to produce 3 flashlights than to produce 2 flashlights?
- c) What is the marginal cost of producing the 4th flashlight? What is the average cost per unit, in dollars? If the producer manufactures 3 flashlights.

18. What explains the U shape of the long-run average (total) cost curve? [2]

19. The following table shows costs of producing scooters. [5]

Quantity of Scooters	Selling Price (\$)	Total Revenue (\$)	Marginal Revenue (\$)	Total Cost (\$)	Marginal Cost (\$)	Profit (\$)
0				1000	--	
1	1700			1600		
2	1400			2000		
3	1100			2500		
4	800			3100		

- a) If the scooter producer makes and sells 4 scooters, what will be its total revenue?
- b) If the scooter producer decides to make and sell 2 scooters rather than 1 scooter, how much *additional* revenue will the firm gain?
- c) What is the marginal cost of producing the fourth scooter?
- d) What is the profit-maximizing output level of the firm?
- e) What is the highest level of profits the scooter producer can attain?

20. Give a real life example of oligopoly and strategic behavior. [2]