

Department of Humanities & Social Sciences, IIT Madras
End Semester Exam.
HS 3002: Principles of Economics

Date: November 27, 2014
Time: 9 AM – 12 Noon

Part B: 30 Marks

Part B: Answer as per instructions

Answer any **four** from the following 8 questions. Each carries **3 marks**.

- 1) Deodorant is a product with many close substitutes.
 - a) Draw the diagram to show the profit maximizing level of output and price of a firm in this market that is in long run equilibrium.
 - b) What is the profit of this firm?
 - c) Show the dead weight loss relative to the socially optimum level of output.
- 2) What is perfect price discrimination? Draw the demand curve and MR curve of a perfectly discriminating monopolist and show the dead weight loss.
- 3) Assume that a monopolist sells a product with the cost function $C = F + 20Q$, where C is total cost, F is fixed cost and Q is the level of output. The demand is given by $P = 60 - Q$, where P is the price in the market. The firm will earn zero economic profit when it charges a price of 30. How much profit does the firm earn when it charges the price that maximizes profit?
- 4) Given below are some data from a country producing milk and honey:

Year	Milk		Honey	
	Price per litre(Rs.)	Qty(lakh litres)	Price per bottle(Rs.)	Qty('000 bottles)
2010	20	1	60	50
2012	30	2	75	100
2014	40	2	100	100

- i) Compute Nominal GDP, Real GDP and GDP Deflator for each year using 2010 as the base year.
 - ii) Compute % change in nominal GDP, real GDP and GDP deflator in 2012 and 2014 from the preceding year.
 - iii) Did economic well being rise more in 2012 or 2014? Explain.
- 5) What is Money? Explain any two functions of money.
- 6) List and describe four determinants of productivity.
- 7) When some activity causes negative externality like pollution, would it be a good idea to ban the activity altogether? Why or Why not?

(PTO)

8) When the prices of different goods change at different rates, how do we measure the rate of inflation?

9) Explain **any 4** from the following: (each carries **2.5 marks**):

$2.5 \times 4 = 10$

Theory of comparative advantage, normal good vs. inferior good, shut down point, Natural rate of unemployment, Phillips curve, financial intermediaries

Answer any **two** from the following three questions. Each carries **4 marks**.

10) Define natural monopoly with example. In case of natural monopoly, do you recommend the regulator to ask the monopolist to charge price equals to marginal cost to encourage him to produce at socially optimum level?

11) Coca-cola and Pepsi are competing in the Indian soft drink market. Each firm is deciding whether to follow an aggressive advertising, in which the firm significantly increases its spending on media and bill board advertising over last year's level, or a restrained strategy, in which the firm keeps its advertising spending equal to last year's level. If both of them follow aggressive strategy, Coca-cola will have Rs100 lakh profit while pepsi will have Rs80 lakh profit. If both of them follow restrained strategy, then Coca-cola will have Rs120 lakh profit and Pepsi will have Rs100 lakh profit. If coca-cola follows aggressive strategy and Pepsi follows restrained strategy, then coca-cola will have Rs170 lakh profit and Pepsi will have Rs40 lakh profit. On the other hand, if coca-cola follows restrained one and Pepsi follows aggressive one, then coca-cola will have Rs80 lakh profit and Pepsi will have Rs140 lakh profit. (a) Construct the pay-off matrix; (b) Which is the dominant strategy for Coca-Cola? (c) Is there any equilibrium in this case? (d) What would have been the best case otherwise?

12) Use the following supply and demand schedules for bicycles to answer the questions below.

	P	QD	Qs
i)	Rs 1500	60	30
ii)	Rs2000	55	40
iii)	Rs2500	50	50
iv)	Rs3000	45	60
v)	R 3500	40	70
vi)	Rs 4000	35	80

- In response to lobbying by the Bicycle Riders Association, the government places a price ceiling of Rs3500 on bicycles. What effect will this have on the market for bicycles? Why?
- In response to lobbying by the Bicycle Riders Association, the government places a price ceiling of Rs2000 on bicycles. Use the information provided above to plot the supply and demand curves for bicycles. Impose the price ceiling. What is the result of a price ceiling of on bicycles?
- Does a price ceiling of Rs 2000 on bicycles make all bicycle buyers better off? Why or why not?

13) Most countries import substantial amounts of goods and services from other countries. Yet academicians say that a nation can enjoy a higher standard of living only if it can produce a large quantity of goods and services itself. Explain your stand giving reasons.