BITS Pilani
Dubai Campus

First Semester 2012-2013
COMPREHENSIVE EXAMINATION

Course: Principles of Economics
Course No. ECON C212/ECON F 211
Max marks: 40 **Weightage: 40%**
Date: 29-12-2012 **Time: 3 Hours**
Year: II & IV

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1. Distinguish between the following: [10]
   (a) Tax incidence and Tax shifting
   (b) Required reserves and Excess reserves in Commercial Bank
   (c) Economic Income and Money Income
   (d) GDP and GNP
   (e) Absolute advantage and comparative advantage in International trade

2. What is an externality? Briefly explain any two ways in which the market responds to externalities. [3]

3. A monopolist's demand function is given by $P = 480 - 8Q$ and the total cost function is given by $400 + 8Q^2$. Calculate the profit maximizing output, price and profit. [3]

4. What is the conceptual difference between fully-distributed cost pricing and incremental cost pricing? Explain with an example. [3]

5. A bicycle manufacturer faces a horizontal demand curve. The firm's total costs are given by the equation
   $TVC = 150\,Q - 20Q^2 + Q^3$ where Q is quantity. Below what price should the firm shut down operations? [3]

6. A car parking space houses car wash facility. It charges $50 for a wash and the hourly wage rate is $45. A researcher helps estimate a production function for the car wash service as follows: $Q = -0.8 + 4.5L - 0.3L^2$
   How many laborers should the firm employ? [3]

7. Briefly explain the concept of Indifference curve? Graphically explain how is the consumer equilibrium level determined ? [4]

8. Is Water Use Efficient?

....Across India, where most people still live off the land, the chief source of irrigation is groundwater, at least for those who can afford to pump it.

Indian law has virtually no restrictions on who can pump groundwater, how much and for what purpose. Anyone, it seems, can- and does – extract water as long as it is under his or her patch of land. That could apply to home owner, farmer or industry.

"We forgot that water is a costly item", lamented regional director of the Central Groundwater Board. "Our feeling about proper judicious use of water vanished".

On a parched, hot morning....a train pulled into the railway station at a village called XYZ. Here, the wells have run dry and the water table fallen so low that it is too salty even to irrigate the fields.

The train came bearing precious cargo: 15 tankers loaded with nearly 120,000 gallons of clean, sweet drinking water.

The water regularly travels more than 150 miles, taking nearly two days, by pipeline & then by rail, so that the residents of a small neighboring town can fill their buckets with water for 15 minutes every 48 hours.

It is a logistically complicated, absurdly expensive proposition. Bringing the water here costs the state about a penny a gallon; the state charges the consumer a monthly flat rate of 58 cents for about 5,300 gallons, absorbing the loss.....

a) Are the markets in water competitive?
b) "Water is not used efficiently". How can efficiency be achieved?
c) Explain graphically how is the concept of dead weight loss applicable in the case of owner, farmer or industry? [6]

9. The generalized demand function for good X is

$Q_d = 60 - 2P_X + 0.01M + 7P_R$ where,

Q_d: quantity demanded of good A each month

P_X : price of good X

M : average household income

P_R : price of a related good

a) Is good X normal or inferior? Explain.

b) Are goods X & R substitutes or complements? Explain. [2]

10. Suppose you are the manager of a chain of computer stores. For obvious reasons you have been closely following developments in the computer industry, and you have just learned that Congress has passed a two- pronged program designed to further enhance the US computer industry's position in the global economy. The legislation provides increased funding for computer education in primary & secondary schools, as well as tax breaks for firms that develop computer software. As a result of this legislation, what do you predict will happen to the equilibrium price & quantity of software? [3]

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First Semester 2012-2013
TEST -II (OB)

Course: Principles of Economics
Course No. ECON C212/ECON F 211
Max marks: 20 **Weight age: 20%**
Date: 11-11-2012 **Time: 50 Minutes**
Year: II & IV

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1. A Poor Pricing Strategy:
   The inclination towards setting up grocery stores and soft drink outlets in petrol pumps is catching up in a big way in all cities in India. One such petrol pump with a soft drink outlet was located at a place where there were no other grocery stores with soft drink outlets within a radius of 5 km. During the summer of 2002, the owner of the outlet offered a discount of 10 percent, and sales soared from 700 bottles per month to 1500 bottles per month. The discount was withdrawn subsequently.
   Encouraged by the response, six months later, the owner decided to bring about a permanent reduction of 10% in the price of soft drinks. In the meantime, two new grocery stores with soft drink outlets were set up in the vicinity. This time, to the owner's dismay, the sales went up marginally from 700 bottles per month to 800 bottles per month, and since a reduction in the price had already been announced, the owner could not revert to the old price soon. He could not reason out as to why the pricing strategy had failed.
   (a) During the summer of 2002, what do you feel the implication would have been on total revenue of the store? Justify your answer with suitable calculations.
   (b) How did the situation change in six months time?
   (c) What was the effect of on the price elasticity due to the change on factors after six months?
   (d) What in your opinion would be the effect on profit of the grocery stores after six months time? [6]

2. Suppose a worker is offered a wage of $5/hour and a fixed payment of $40.
   (a) What is the equation for the worker's opportunity set in a given 24 hour day?
   (b) What are the maximum total earnings the worker can earn in a day?
   (c) What is the price to the worker of consuming an additional one hour and 15 minutes of leisure? [3]

3. A firm has the following short run production function:
   $Q = 150L+18L^2-1.5L^3$
   Where Q = quantity of output per week
   L = number of workers employed.
   (a) When does the law of diminishing returns take effect?
   (b) Assume that each worker is paid $15 per hour for a 40 hour week, and that the output is priced at $5. How many workers should the firm employ? [5]

4. Micro Applications Inc. is a small firm that specializes in the production and mail-order distribution of computer programs for microcomputers. The accounting department has gathered the following data on development and production costs for a typical program and the documentation (i.e the manual) that must accompany the program
   Development costs:
   Program development: $10,000
   Manual preparation and typesetting: $3000
   Advertising: $10,000
   Variable Costs per unit:
   Blank disc: $2
   Loading cost: 0.50
   Postage and handling: 1.25
   Printing of the manual: $ 2.75
   A typical program of this type, including the manual , sells for $40. Based on this information:
   (a) Micro Applications has a minimum profit target of $40,000 on each new program it develops. Determine the unit and dollar volume of sales required to meet this goal.
   (b) While this program is still in the development stage, market prices for software fall by 25% due to a significant increase in the number of programs being supplied to the market. Determine the new breakeven and dollar volumes. [4]

5. The cost function for a firm is given by $C(Q)= 5 + Q^2$
   If a firm sells output in a perfectly competitive market and other firms in the industry sell output at price $20, what price should the manager of this firm out on the product? What level of output should be produced to maximize profits? [2]

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BITS Pilani
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First Semester 2012-2013
TEST -I (CB)

Course: Principles of Economics
Course No. ECON C212/ECON F 211
Max marks: 25 **Weightage: 25%**
Date: 23-09-2012 **Time: 50 Minutes**
Year: II & IV

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1. Graphically show the effect of the decrease in the price of the substitute for X on the demand of X. [2]

2. Suppose that the demand and supply functions for good X are

   $Q_d = 50 - 8P$ $Q_s = -17.5 + 10P$

   a) What are the equilibrium price and quantity?
   b) What is the market outcome if price is \$2.75? What do you expect to happen & why?
   c) What is the market outcome if price is \$4.25? What do you expect to happen & why? [6]

3. Write short notes on the following:
   (i) Macroeconomics & Microeconomics
   (ii) Law of supply [4]

4. The National Enquirer reported that, in their divorce settlement, Burt Reynolds offered Loni Anderson \$ 10,000,000 spread evenly over 10 years but she instead demands \$ 5,000,000 now.
   a) If the appropriate discount rate is 8%, which alternative is better for Burt & which for Loni?
   b) What if the discount rate is 20%? [6]

5. When profits in a given industry are higher than in other industries, new firms will attempt to enter that industry. When losses are recorded, some firms will likely leave the industry. This sort of "evolution" has changed the global landscape of personal computer markets.

At the start of the PC era, personal computer markers enjoyed positive economic profits. These higher profits led to new entry and heightened competition. Over the past two decades, entry has led to declines in PC prices and industry profitability despite significant increases in the speed and storage capabilities of PCs. Less efficient firms have been forced to exit the market.

In the early 2000s, IBM – the company that launched the PC era when it introduced the IBM PC in the early 1980s – sold its PC business to China-based Lenovo. Compaq – early leader in the market for PCs – has since been acquired by Hewlett-Packard. A handful of small PC makers have enjoyed some success competing against the remaining traditional players, which include Dell and Hewlett-Packard. By the late 2000s, Dell's strategy switched from selling computers directly to consumers to entering into relationships with retailers such as BestBuy and Staples. While only time will tell how these strategies will impact the long run viability of traditional players, competitive pressures continue to push PC prices and industry profits downwards.

a) Mention five forces framework that impact the industry profitability as pioneered by Michael Porter.
b) "Profits signal to resource holders where resources are most highly valued by society". Explain the statement in the light of the above case.
c) Mention two main factors which would have made the firm less efficient in the market.
d) How did Dell change its market strategy? [7]

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II & IV Year – I Semester 2012-2013

QUIZ-II (CB)

Course: Principles Of Economics   Course No. ECON C212/ECON F 211

Max marks: 7   Weightage: 7%   Date: 20-12-2012   Time: 20 Minutes

Name: **Id No.:**

1. ______________________________ specifies the relationship between the price received for exports and the amount of imports a country is able to buy with that money.

2. The government may intervene in market failures in each of the following ways *except*:
   a) Creating marketable permits.
   b) Offering subsidies for goods and services that are overproduced.
   c) Imposing Pigouvian taxes to reduce production and consumption of good and services that are overproduced.
   d) Creating individually transferable quotas (ITQs).

3. Which of the following statements is true regarding externalities?
   a) Both negative and positive externalities lead to inefficient outcomes in markets
   b) Negative externalities lead to inefficiencies in markets, but positive externalities do not
   c) Negative externalities occur when the good harms those who consume it.
   d) Positive externalities occur when the good benefits those who consume it.

4. Full cost pricing and marginal cost pricing are two examples of:
   a) Marketing-oriented pricing
   b) Cost-oriented pricing
   c) Product line pricing
   d) Value pricing

5. ________________refer to difference between the Market Price and Cost of Production.

6. ___________________is derived from dividing national income from the total population of the country.

7. Which of the following offers the best example of an external cost?
   a) The opportunity cost of money that an entrepreneur has invested in her business.
   b) The payments to owners of labor resources and coal inputs used by a coal-burning electric generating facility
   c) The price paid by households for electricity service, including both the electricity itself and the cost of transporting the electricity through power lines.
   d) The harms to private property, open-access resources, and human health caused by pollution byproducts of electricity production, such as acid rain caused by sulfur dioxide emissions from coal-burning power plants.

BITS Pilani
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II & IV Year – I Semester 2012-2013
QUIZ-I (CB)

Course: Principles Of Economics		Course No. ECON C212/ECON F 211	
Max marks: 8	Weightage: 8%	Date: 01-11-2012	Time: 20 Minutes
Name:		Id No.:	

1. Connie Mix is a consultant to Vidget Corp. He tells them that their product, Vidgets, is an inferior good. He would make this claim if he believed that the product had:
   a) an income elasticity greater than zero.
   b) an income elasticity less than zero.
   c) an income elasticity greater than one.
   d) price elasticity of supply less than one.
   e) None of the above

2. A firm plans on raising the price of their good from \$1.50 to \$1.60. The short-run elasticity of demand is .67 and the long-run elasticity of demand is 1.4. The effect of this price increase will be
a) to increase revenues in both the short-run and long-run
b) to decrease revenues in both the short-run and long-run
c) to increase revenues in the short-run and decrease revenues in the long-run.
d) to decrease revenues in the short-run and increase revenues in the long-run.
e) None of the above

3. The relationship between the average product of labor (AP_L) and the marginal product of labor (MP_L) is as follows:
   a) When MP_L is above AP_L, AP_L rises.
   b) $MP_L > AP_L$ when AP_L is declining.
   c) AP_L increases as long as MP_L increases.
   d) When MP_L is equal to AP_L, AP_L is minimum.
   e) When MP_L is below AP_L, AP_L rises.

4. In an indifference curve/budget line diagram, if a person is willing to give up a large quantity of the good or service measured on the vertical axis to get an additional unit of the good or service measured on the horizontal axis while remaining indifferent, then the indifference curve is
a) steep and the marginal rate of substitution is high.
b) flat and the marginal rate of substitution is high.
c) flat and the marginal rate of substitution is low.
d) steep and the marginal rate of substitution is low.