BITS PILANI – DUBAI CAMPUS
INTERNATIONAL ACADEMIC CITY, DUBAI
IV Year Elective– I SEMESTER 2011-2012
COMPREHENSIVE EXAMINATION

COURSE: PRINCIPLES OF ECONOMICS
COURSE NO.: ECON C212

Max. Marks: 40 Weightage: 40% Date: 11.01.12 Time: 3 Hours

Attempt all the questions.

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1. Briefly discuss the three main instruments that Federal Reserve (FED) uses to control the money supply and interest rates. [3]

2. Write short notes on the following: [8]
   (i) Purchasing Power parity
   (ii) Consumer Surplus
   (iii) Gross national product (GNP)
   (iv) Gini Coefficient

3. Explain the three types or degrees of price discrimination. [4]

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

5. Space Dynamics Inc. produces electronic components for an anti missile system. Each component sells for $ 900, average variable cost is constant at $ 700 and total fixed cost is $ 10,000. Determine the breakeven rate of output. [4]

6. Explain graphically the change in the market equilibrium if there is increase in income and X is an inferior good. [3]

7. A new pizza place, Fredrico's, opens in New York City. The average price of a medium pizza in New York is $12 and, because of the large number of pizza sellers, this price will not be affected by the new entrant in the market. The owner of Fredrico's estimates that monthly total costs, including normal profit will be,
   $TC = 1000 + 2Q + 0.02\,Q^2$
   To maximize total profit, how many pizzas should be produced each month? In the short run, how much economic profit will the business earn each month? [4]

8. What is excise tax? Who bears the major proportion of tax incidence when
   (i) the demand is less elastic and
   (ii) the supply is less elastic. [3]

9. The location is the busy town of Pune, with the young working population growing exponentially. Snacks, like paav (Indian/Maharashtrian equivalent of American burger), are in great demand and so is the supply. Every small tea/snack shop sells it. The going price is Rs 10. A new entrant decides to set up one such stall. He/she estimates that the total monthly costs, including normal profit, will be $TC = 1000 + 2Q + 0.01Q^2$

   The first question that he/she seeks an answer to is how much should he/she produce so that he/she maximizes his/her profits. He/she has been told that this is a lucrative business and once he/she gets his/her production figure he/she can sit back and enjoy the profits. Do the following:

   a) Assess the market structure in terms of characteristics
   b) Determine the profit maximizing output.
   c) Assess how lucrative the business is in terms of economic profit.
   d) Specify the condition which determines the point below which the owner will shut down his/her shop in the short run.

   [2+2+2+2]

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BITS PILANI – DUBAI CAMPUS
INTERNATIONAL ACADEMIC CITY, DUBAI
IV Year Elective– I SEMESTER 2011-2012
TEST– II (Open Book)

COURSE: PRINCIPLES OF ECONOMICS
COURSE NO.: ECON C212

Max. Marks: 20 Weightage: 20% Date: 18.12.11 Time: 50 Minutes

Attempt all the questions.

1. ACME coal paid \$5000 to lease a railcar from the Reading Railroad. Under the terms of the lease, \$1000 of this payment is refundable if the railcar is returned within two days of signing the lease.
   a) Upon signing the lease and paying \$5000, how large are ACME's fixed costs and sunk costs respectively?
   b) One day after signing the lease, ACME realizes that it has no use for the railcar. A farmer has a bumper crop of corn and has offered to sublease the railcar from ACME at a price of \$4500. Should ACME accept the farmer's offer and why? [4]

2. Computer is the final product and its demand & cost functions are:
   $P_c = 100 - 0.001Q_c$ & $TC_c = 300000 + 10Q_c$
   The intermediate division manufactures memory chips & its total cost is:
   $TC_m = 500,000 + 15Q_m + 0.0005Q_m^2$.
   Assuming $Q_c = Q_m$, determine the profit maximizing quantity produced and the transfer price for the product when no external market exists for the intermediate product. [4]

3. Suppose that a competitive industry is in long-run equilibrium. Then the price of a substitute good (in consumption) decreases.
   (i) What will happen in the short run to
   a) The market demand curve
   b) The market supply
   c) Market price

   (ii) What will happen in the long run? [5]

4. Controlling Carbon- News: By Fiona Harvey

Carbon prices soared yesterday, sparked by a snap of cold weather across Europe in one of the busiest days of trading since the market was launched under the European Union's greenhouse gas emissions scheme.

Carbon reached Euros 9.08 a ton at the end of trade, the highest closing price since the emissions trading scheme was launched on January 1. The scheme established a new market for carbon by setting emissions allowances for energy – intensive industry which can be bought and sold, putting a price on carbon dioxide for the first time.

Companies producing less than their limit, usually through improving their energy efficiency or introducing new technologies can sell their excess allowances on an open market. Companies producing more than their limit, perhaps because of expansion of their business or a failure to invest in new technologies, must buy extra permits or face fines of Euros 40 a ton from the European Union.

The snap of cold weather was one of the important factors in raising the carbon price and the volume of trades, according to carbon analysts Point Carbon.

Much of England and southern Scotland saw problems with snow and ice, following strengthening of easterly winds and falling temperatures from the continent. There were 15 cms of snow in Edinburgh. The Met Office said the icy blast would last for the rest of the week. Much of Continental Europe also saw snow amid sub-zero temperatures.

As cold weather strikes, demand for heating and electricity surges, and with it the output of electricity generators. This in turn creates more carbon dioxide – a by-product of burning fossil fuels.

As generators get to grips with the implications of the sudden onset of more severe winter weather for their output, they might choose to buy more carbon dioxide allowances... Other factors that buoyed prices were record power prices in Germany for 2006 and market rumors that the EU would force a larger than expected cut in the amount of carbon that Polish industries would be allowed to emit.

a) Name the economic concept that explains the launch of Emission Trading scheme?
b) How does the creation of market justify the above economic concept?
c) "Cold snap pushes up carbon prices" Explain the statement in the light of economic concepts.
d) Environmentalists argue that "We cannot give anyone the option of polluting air and water for a fee". Economists however, are of the opinion that "people face tradeoffs". Justify the economist's perspective.

[7]

BITS PILANI – DUBAI CAMPUS
INTERNATIONAL ACADEMIC CITY, DUBAI
IV Year Elective– I SEMESTER 2011-2012
TEST– I (CB)

COURSE: PRINCIPLES OF ECONOMICS
COURSE NO.: ECON C212
Max. Marks: 25 Weightage: 25% Date: 23.10.11 Time: 50 Minutes
Attempt all the questions.

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1. What are the essential characteristics of Indifference curve. Explain each of them with the diagram. [4]
2. The production function for a steel company is as follows:
$$Q = 20K - K^2 + 12L - 0.5L^2$$
Price per unit of K & L are $4000 and $2000 respectively. Tentative budget is $28000. Specify the efficient mix of K and L such that the output is maximized subject to the budget constraint. [5]

3. (i) Explain the law of demand.
(ii) What happens to the demand curve when the following changes happen:
a) Income increases and the commodity is inferior.
b) The price of the substitute good decreases. [2+2]

4. 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? [5]

5. Studies have fixed the short run price elasticity of demand for gasoline at the pump at -0.20. Suppose that international hostilities lead to a sudden cut off of crude oil supplies of refined gasoline drop 10%.
a) If gasoline was selling for $1.40 per gallon before before the cutoff, how much of a price increase would you expect to see in the coming months?
b) Suppose that the government imposes a price ceiling on gas at $1.40 per gallon. How would the relationship between consumers and gas station owners change?[4]

6. What is meant by returns to scale? Specify the nature of returns to scale for the production function: $Q = 5\,K^{0.4}\,L^{0.4}$. [3]

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BITS PILANI – DUBAI CAMPUS

Dubai International Academic City

IV Year – I Semester

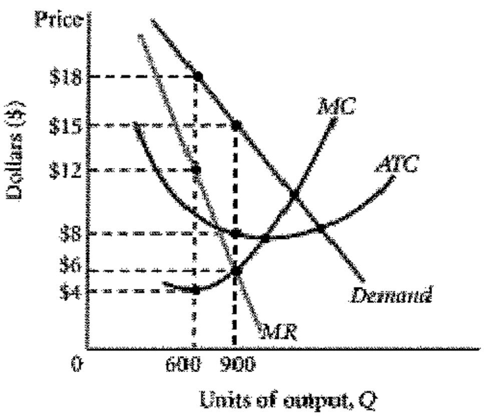
QUIZ-II (CB)

Course: Principles Of Economics Course No. ECON C212

Max marks:7 Weightage: 7% Date: 5-12-2011 Time: 20 Minutes

Name: **Id No.:** **Sec:**

1. For the figure given below:



The profit maximizing output is ____________

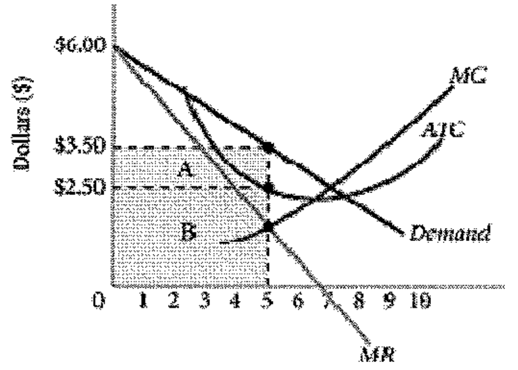
2. A company produces a single article and sells it at $10 each. The average variable cost of production is $6 each and total fixed cost of the concern is $400 per annum. The breakeven point is _______________.

3. In case of pricing of joint products, if marginal revenue of either product is negative, the quantity sold of that product should be reduced to the point where _________________.

4. A firm will realize the highest level of profit if it is able to engage in _________________ degree of price discrimination.

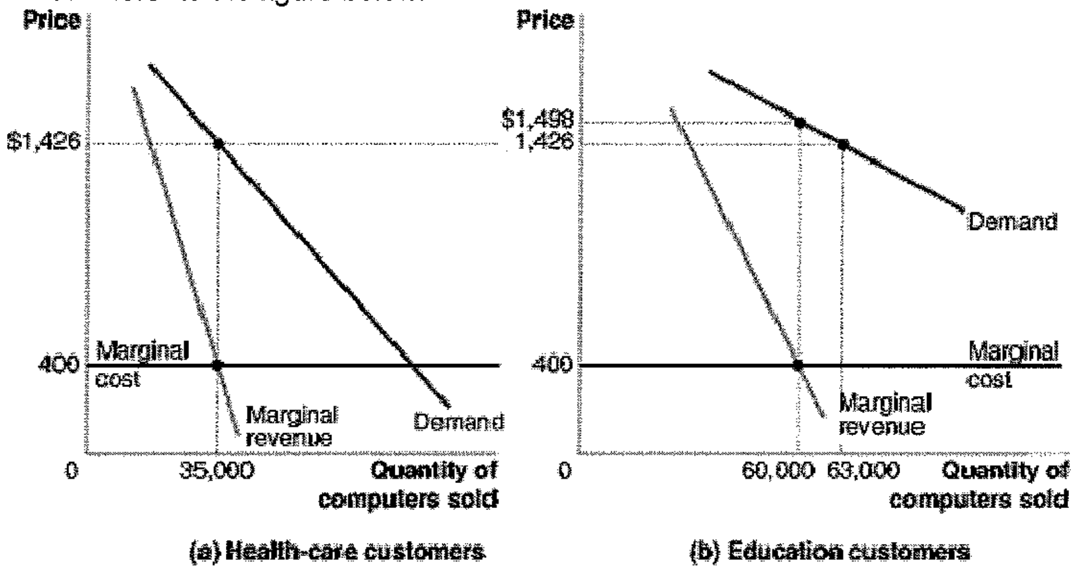
5. A firm charges $14 for a product. If the markup is 40%, then the fully allocated average cost is ________________________

6. Refer to the figure below. Which area represents the profit?



a) Area A b) Area B c) Area (A+B) d) None of the above

7. Refer to the figure below.



The customers having a lower price elasticity of demand are ____________________________.

BITS PILANI – DUBAI CAMPUS

Dubai International Academic City

IV Year – I Semester

QUIZ-II (CB)

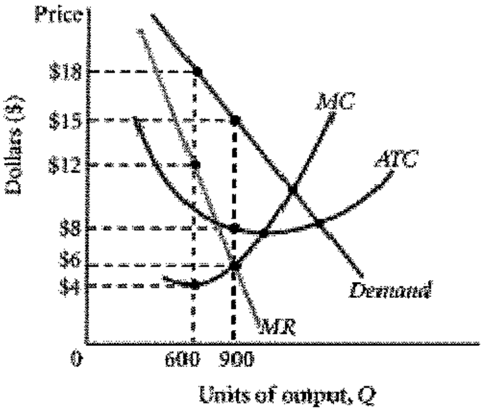
Course: Principles Of Economics | Course No. ECON C212

Max marks:7 | Weightage: 7% | Date: 5-12-2011 | Time: 20 Minutes

Name: | **Id No.:** | **Sec:**

1.

For the figure given below:



The profit maximizing price is ___________

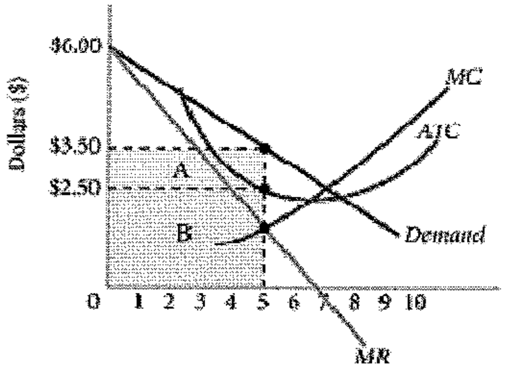
2. A company produces a single article and sells it at $10 each. The average variable cost of production is $5 each and total fixed cost of the concern is $250 per annum. The breakeven point is ______________.

3. In case of pricing of joint products, if marginal revenue of either product is negative, the quantity sold of that product should be reduced to the point where ________________.

4. A firm will realize the highest level of profit if it is able to engage in ________________ degree of price discrimination.

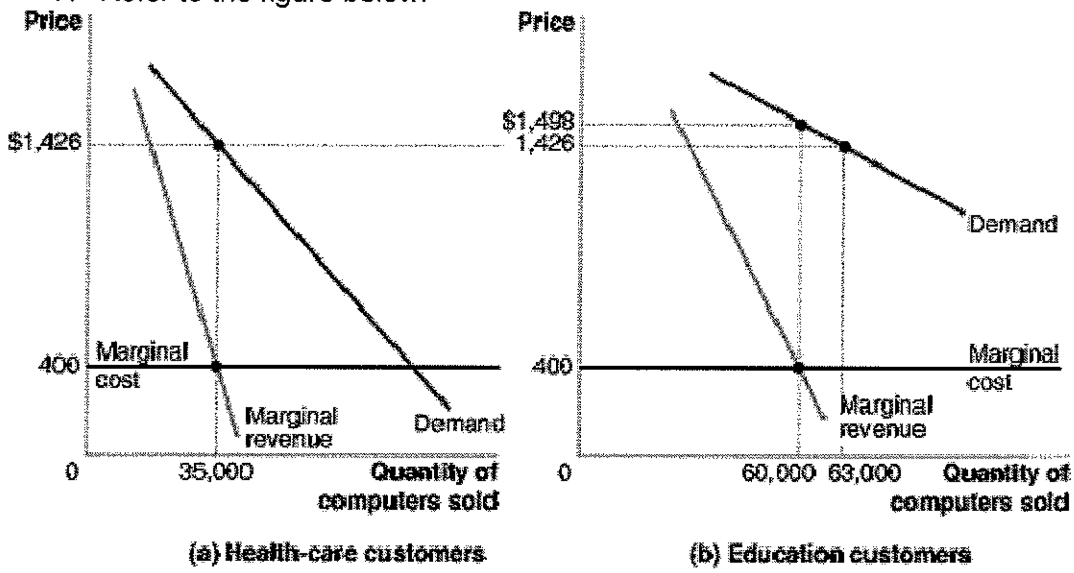
5. A firm charges $18 for a product. If the markup is 40%, then the fully allocated average cost is ______________________

6. Refer to the figure below. Which area represents the total revenue?



a) Area A b) Area B c) Area (A+B) d) None of the above

7. Refer to the figure below.



The customers having a higher price elasticity of demand are ______________________.

BITS PILANI – DUBAI CAMPUS

Dubai International Academic City

III Year – II Semester

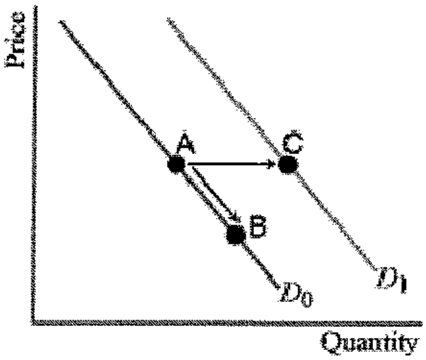
QUIZ-I (CB)

Course: Principles Of Economics Course No. ECON C212

Max marks:8 Weightage: 8% Date: 26-09-2011 Time: 20 Minutes

Name: **Id No.:** **Sec:**

1. Refer to the figure below. Which move illustrates the impact of a decrease in market price on market demand, all else the same?



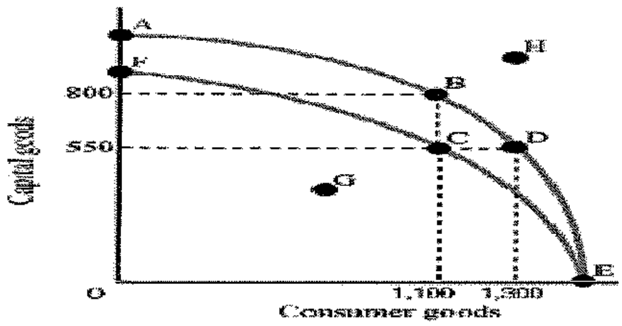
a) The move from A to C. b) Both moves show the same result on demand.

c) The move from A to B. d) None of the above.

2. Using a day at the beach as an example, what is the opportunity cost of leisure?

(a) The opportunity cost of leisure at the beach is the value of the things that you could have produced during the time you were at the beach. For example, you could have used the time to work and earn some money.
(b) According to economists, leisure activities are the only activities that do not carry an opportunity cost.
(c) Leisure is free. For example, you don't have to pay for the benefit of enjoying the sun or relaxing at the beach.
(d) Leisure has an opportunity cost only if there is a cost associated with it. For example, entering the beach may require you to pay a fee.
(e) None of the above

3. Refer to the figure below. At which of the points, resources are not fully and efficiently employed along both the AE and the FE curves?



a) A,F,E b) B,C,D c) H d) G e) G & H

4. Which of the following is more closely associated with the term *capital*?

(a) Money.   b) Goods produced for present consumption

(c) Goods used to produce other goods. (d) Financial investment (e) Depreciation

5. Determinants of demand other than price include all of the following except one. Which one?

(a) Wealth, or net worth   (b) The cost of production.   (c) Household expectations

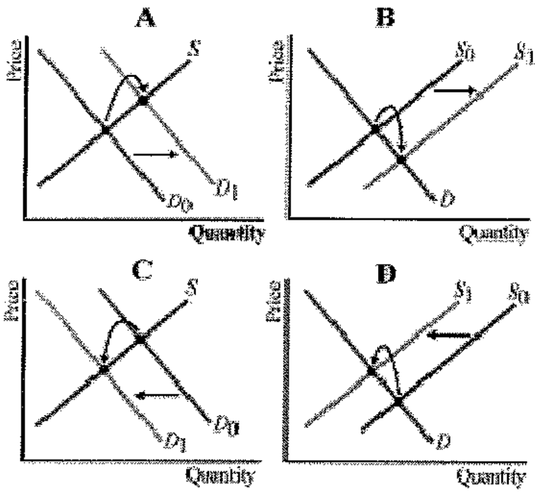
(d) The tastes and preferences of households   (e) The prices of other goods and services

6. That demand curves intersect both the price and the quantity axes is a matter of common sense. Which of the following explains that they intersect the price axis?

(a) Time limitations and diminishing marginal utility   (b) Limited incomes and wealth

c) The law of demand.   (d) All of the above

7. Refer to the figure below. In 1973, the Arab oil embargo resulted in a severe shortage of oil in the United States, and an increase in production costs. In a market where production requires the use of oil, which of the graphs below would st describe the impact of the oil embargo?



(a) A   (b) C   (c) B   (d) D   (e) None of the above.

8. The *law of demand* states that:

a) When demand for a good increases, beyond some point, the price will necessarily begin to increase.

b) Goods that are more scarce tend to be more expensive.

c) When a good or service is less available, people don't consume as much of it; therefore, the price will fall.

d) There is a negative (or inverse) relationship between the price and the quantity demanded of a good or service