EC101 Microeconomics (August 2024)

Welcome to this test. There is no limit to the number of questions you could potentially attempt but you will have a total of 30 minutes to do this test (five minutes for perusal) - so do as many as possible. All are multiple-choice questions worth one point each. You need to mark the option that best answers each question. The questions will appear randomly. All the best.

If the goods X and Y are substitutes, then the cross-price elasticity of demand for X with respect to the price of Y is ... (1 Point)

- [x] zero
- [ ] None of the other options is correct
- [ ] negative
- [ ] infinity
- [ ] positive

A competitive market faces a horizontal supply curve with the specification P = c, where c is the marginal cost of production which is a constant. What is the competitive output level when the (inverse) demand curve is specified as follows (e = 2.718... is the base of the natural logarithm) (1 Point)

$$P = a - e^{Q}; \ (a > c)$$

- [ ] $a - c$
- [x] $\ln(a - c)$
- [ ] *None of the other options is correct*
- [ ] $e^{(a-c)}$

- ○ c

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a price floor of P = 7 is imposed by the government, what quantity will be bought? (1 Point)

- ○ None of the other options is correct
- ○ Q = 10
- ○ Q= 15
- ◉ Q = 5
- ○ Q = 9

Assume that there are only two firms in a competitive market facing a common wage rate of $w = 2$ per unit of labour (l) employed (labour is the only input in this economy). What must be true for the market supply for the only commodity Q they produce if their production functions are (assume zero fixed-costs) ... (1 Point)

$$Q_1 = \sqrt{l}\,;\; Q_2 = \tfrac{1}{2}\sqrt{l}\; where\; Q = Q_1 + Q_2$$

- ◉ *Unit elasticity*
- ○ *Infinite elasticity*
- ○ *None of the other options is correct*
- ○ *Zero elasticity*
- ○ *Negative elasticity*

Imagine an economy with 100 units of labour and 150 units of land, which are allocated to produce both millets (x) and wheat (y). The production process involves two units of labor and one unit of land for each unit of millet, and one unit of labor and two units of land for each unit of wheat. What will be the production possibility frontier for the entire economy? (1 Point)

- $\max\ \{x + 2y,\ 2x + y\} = 150$
- $\max\ \{4x + 2y,\ 3x + 6y\} = 300$
- $x + 2y \leq 300,\ 2x + y \leq 300$
- *None of the other options is correct*
- $\min\ \{x + 2y,\ 2x + y\} = 100$

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If an excise subsidy of 5 per unit was given to sellers of burgers, how many units will be bought and sold? (1 Point)

- None of the other options is correct
- Q = 12
- Q = 9
- Q = 15
- Q = 6

Suppose you hire one worker (for INR 800 a day) and one coffee machine (for INR 1200 a day) in your café. This worker is able to produce and sell 100 cups of coffee priced at INR 50 per cup. Suppose you hire an additional worker and an additional coffee machine for the exact same costs above, and the additional worker (using this

new second coffee-machine) is able to produce and sell 200 cups of coffee (again at INR 50 per cup) in addition to the 100 cups by your first worker. Which of the following statements is true? (1 Point)

- None of the other options is correct
- average cost of production is constant
- total cost of production is constant
- average cost of production is increasing
- average cost of production is decreasing

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a price floor of P = 4 is imposed by the government, what quantity will be sold? (1 Point)

- Q = 5
- Q= 15
- Q = 9
- None of the other options is correct
- Q = 6

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a price ceiling of P = 2 is imposed by the government, how much will the buyers pay for the product? (1 Point)

- None of the other options is correct

- ○ P = 6
- ○ P = 5
- ◉ P = 2
- ○ P = 7

A per-unit tax on buyers (i.e. sales tax) will lead to ... (1 Point)

- ○ a vertically downward shift in the demand curve
- ◉ a vertically downward shift in the supply curve
- ○ None of the other options is correct
- ○ a vertically upward shift in the demand curve
- ○ a vertically upward shift in the supply curve

In a market with a downward-sloping demand curve and a perfectly inelastic supply curve, a sales tax on the buyers means that ... (1 Point)

- ○ None of the other options is correct
- ○ The buyers will most definitely stop transacting
- ◉ The buyers will ultimately bear the full amount of the tax
- ○ the sellers will ultimately bear the full amount of the tax
- ○ The sellers will most definitely stop transacting

Assume that all the *n* firms in a market individually have unit-elastic supply curves. What must be true for the market supply for the only commodity Q they produce if their production functions are (assume zero fixed-costs) ... (1 Point)

- elasticity equals *n*
- Zero elasticity
- Infinite elasticity
- Unit elasticity
- None of the other options is correct

Which of the following causes a shift in the demand curve? (1 Point)

- Change in tastes and preferences
- Each of the other options is correct
- Change in the price of substitute goods
- Change in consumer income
- New expectations about the future of the given marker

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a price ceiling of P = 7 is imposed by the government, how much will the buyers pay for the product? (1 Point)

- P = 5
- None of the other options is correct

- P = 7
- P = 2
- P = 6

In a market with an upward-sloping supply curve and a perfectly inelastic demand curve, an excise tax on the sellers means that ... (1 Point)

- [x] the buyers will ultimately bear the full amount of the tax
- the sellers will most definitely stop transacting
- None of the other options is correct
- the sellers will ultimately bear the full amount of the tax
- the buyers will most definitely stop transacting

Some labour markets are characterized by a certain amount of labour willing to work at any wage. What is the elasticity of labour supply in such a market? (1 Point)

- Unity
- Depends on the wage
- Infinity
- None of the other options is correct
- [x] Zero

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a subsidy of 5 per unit was given to sellers of burgers, how much will the sellers end up receiving per unit? (1 Point)

- P = 5
- P = 7
- P = 2
- P = 6
- None of the other options is correct

A per-unit tax on sellers (i.e. excise tax) will lead to ... (1 Point)

- a vertically upward shift in the supply curve
- a vertically downward shift in the supply curve
- None of the other options is correct
- a vertically downward shift in the demand curve
- a vertically upward shift in the demand curve

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a subsidy of 5 per unit was given to buyers of burgers, how much will the sellers end up receiving per unit? (1 Point)

- P = 2
- P = 5
- None of the other options is correct

- P = 6
- P = 7

An economy where labour (l) is the only input produces two commodities X and Y. The total endowment of labour (L) could be used up to produce either X, or Y, or a combination of both. What is the production possibility frontier for this economy if the individual production functions are given by: (1 Point)

$$x = f(l_x) = \sqrt[3]{l_x};\ y = g(l_y) = (1/2)\sqrt{l_y};\ where\ l_x + l_y = L\ (Labour\ is\ divided\ between\ X\ and\ Y$$

- $x^2+4y^2=L$
- $4x^3+y^2=L$
- $x^2+4y^3=L$
- *None of the other options is correct*
- $x^3+4y^2=L$

Which of the following causes a shift in the supply curve? (1 Point)

- New expectations about the future of the given marker
- Change in number of sellers
- Change in technology
- Change in input prices
- Each of the other options is correct

Suppose you hire one worker (for INR 800 a day) and one coffee machine (for INR 1200 a day) in your café. This worker is able to produce and sell 100 cups of coffee priced at INR 50 per cup. Suppose you hire an additional worker and an additional coffee machine for the exact same costs above, and the additional worker (using this new second coffee-machine) is able to produce and sell 200 cups of coffee (again at INR 50 per cup) in addition to the 100 cups by your first worker. Which of the following statements is true? (1 Point)

- ○ marginal cost of production is below the average cost
- ◉ marginal cost of production exceeds the average cost
- ○ average cost of production is constant
- ○ None of the other options is correct
- ○ total cost of production is constant

Which of the following is not a market form? (1 Point)

- ○ monopolistic competition
- ○ perfect competition
- ○ monopoly
- ○ oligopoly
- ◉ None of the other options is correct

If the price-elasticity of demand in a market is (-)0.5, then as a result of increase in price by 10%, total revenue will most definitely witness ... (1 Point)

- ○ a decrease

- ○ None of the other options is correct
- ○ an increase
- ◉ no change (i.e. total revenue will stay the same)
- ○ a decrease first and then an increase

The average total cost to produce 100 vada-pavs is INR10.25 per vada-pav. The marginal cost is constant at INR10 for each vada-pav produced. The total cost to produce 50 vada-pavs is (1 Point)

- ○ 600
- ○ 525
- ◉ 512.5
- ○ None of the other options is correct
- ○ 500

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

What is the equilibrium price? (1 Point)

- ○ P = 2
- ◉ P = 5
- ○ P = 7
- ○ P = 6

- None of the other options is correct

Assume that there are only two firms in a competitive market facing a common wage rate of *w = 2* per unit of labour (*l*) employed (labour is the only input in this economy). What is the market supply for the only commodity Q they produce if their production functions are (assume zero fixed-costs) ... (1 Point)

$$Q_1 = \sqrt{l}\,;\; Q_2 = \frac{1}{2}\sqrt{l}\; where\; Q = Q_1 + Q_2$$

- $Q = \frac{16P}{5}$
- *None of the other options is correct*
- $Q = 20P$
- $Q = \frac{P}{20}$
- $Q = \frac{5P}{16}$

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a price ceiling of P = 7 is imposed by the government, what quantity will be sold? (1 Point)

- Q = 12
- Q= 15
- None of the other options is correct
- Q = 9
- Q = 6

Which of the following costs always declines as output increases? (1 Point)

- marginal cost
- average fixed cost
- average cost
- None of the other options is correct
- average variable cost

A village consumes only chicken and potatoes. In this village, a household with an income of $21 per week consumes only chicken on Sundays (spending $9 on the same) after consuming only potatoes on each of the remaining six days of the week (spending $2 on the same for each of the six days, totalling to $12). Now, the price of consuming potato per day rises from $2 to $3, so that consuming potato for six days costs $18, leaving less than adequate money for this household to consume chicken on the Sunday. So this household spends the remaining $3 on potatoes on Sunday as well. For this household ... (1 Point)

- the laws of supply and demand cannot be violated
- None of the other options is correct
- the law of demand is violated for chicken
- the law of demand holds for potatoes
- the law of demand is violated for potatoes

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

What is the equilibrium quantity? (1 Point)

- ○ Q = 6
- ○ None of the other options is correct
- ○ Q = 12
- ◉ Q = 9
- ○ Q = 15

If people are willing to buy more of X as a consequence of a fall in price of Y, then X and Y are ... (1 Point)

- ◉ substitutes for each other
- ○ both inferior goods
- ○ complementary goods
- ○ None of the other options is correct
- ○ both luxury goods

Which of the following is true of perfectly competitive markets? (1 Point)

- ○ No barriers to entry
- ○ Buyers and sellers are price takers
- ○ Homogeneous products
- ◉ Each of the other options is correct
- ○ Many buyers and many sellers

The market for vibranium in Wakanda is characterized by a standard downward-sloping demand curve and an upward-sloping supply curve. After Thanos wipes out half the population, what happens to the market for vibranium in the new equilibrium? (1 Point)

- (●) Price unambiguously rises
- ( ) None of the other options is necessarily correct
- ( ) Price unambiguously falls
- ( ) Quantity traded unambiguously increases
- ( ) Quantity traded unambiguously decreases

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a price ceiling of P = 4 is imposed by the government, how much will the buyers pay for the product? (1 Point)

- ( ) None of the other options is correct
- ( ) P = 5
- ( ) P = 7
- ( ) P = 6
- (●) P = 4

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a subsidy of 5 per unit was given to buyers of burgers, how much will the buyers end up paying per unit? (1 Point)

- P = 5
- P = 2
- P = 7
- P = 6
- None of the other options is correct

The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a price ceiling of P = 4 is imposed by the government, what quantity will be sold? (1 Point)

- None of the other options is correct
- Q = 5
- Q = 2
- Q= 7
- Q = 6

Suppose, in order to open a restaurant in an educational institute, one must acquire a license that costs INR 5 lakhs. This cost to obtain the license to operate is an example of ... (1 Point)

- marginal cost
- opportunity cost
- fixed cost

- variable cost
- None of the other options is correct

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- None of the other options is correct
- P = 2
- P = 5
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The demand curve for burgers in a market is Q = 19 - 2P, and the supply curve is given by Q = 3P - 6, where P represents the price per unit and Q represents quantity.

If a subsidy of 5 per unit was given to buyers of burgers, how many units will be bought and sold? (1 Point)

- Q = 6
- Q = 9
- Q = 12
- None of the other options is correct
- Q = 15