Detailed Solutions: Sample Questions for practice for exam 1:

1. B

Solution: Marginal benefit is the additional satisfaction that a consumer receives when an additional good or service is purchased. Marginal benefit generally decreases as consumption increases. Marginal cost is the change in cost of the additional unit of a good or service. Individuals would choose the ones with more marginal benefits than marginal costs, and they would maximize their utility when the marginal benefit is equal to the marginal cost.

2. 3 tons

Solution: The marginal costs of the 1st, 2nd, 3rd, and 4th ton are $1,000, $1,200, $1,400, $1,600, respectively. The marginal cost of an additional ton is $1,500. Since $1,400 is smaller than $1,500, Albert would make more profit when producing 3 tons than when producing 2 tons. Since $1,500 is smaller than $1,600, he would make less profit when producing 4 tons than when producing 3 tons. Therefore, Albert would maximize his profit when producing 3 tons.

3. D

Solution: Fixed costs are costs that do not change when sales or production volumes increase or decrease. They are not directly associated with manufacturing a product or delivering a service. As a result, fixed costs are considered to be indirect costs.

4. C

Solution: When the marginal benefit of additional unit is larger than the marginal cost, buying one more unit will increase the buyer’s utility. The rational buyer will maximize his utility when keeping buying a product until marginal benefit equals price. When the quantity is larger than this optimal quantity, the marginal benefit will be smaller than the marginal cost and the buyer’s utility will decrease with more units.

5. B

The opportunity cost of something is the value of the next best alternative you have to give up. The opportunity costs of going on vacation include the cost of airfare ($600), a hotel ($400), spending the day at a day resort ($200), the extra cost of food and beverages ($300-$200=$100), and the salary he will give up ($1,000).

6. C

Solution: A decrease in the price of a complement in production of good G will decrease the quantity supplied of the complement, and thus decrease the supply of good G. That’s, the supply curve of good G will shift to the left, which will raise the price of good G and decrease the quantity sold of good G.

7. D

Solution: The marginal benefit of 20 million gallons of gas is $5 per gallon, and the marginal cost of 20 million gallons of gas is $3.99 per gallon. The marginal benefit of 20 million gallons is larger than the marginal cost of 20 million gallons, so the equilibrium quantity is larger than 20 million gallons. Since marginal cost is increasing and marginal is generally decreasing, the market can be in equilibrium at some point where marginal cost is equal to marginal benefit. The equilibrium price in this market is between $3.99 and $5.

8.

a. A decrease in the price of fishing rods

Solution: The movement from one point on a fixed demand curve to another point on the same curve that is caused by a price change.

b. An increase in the demand for fishing rods

Solution: A shift of the demand curve to the right is caused by an increase in demand.

c. R to N is a decrease in demand, and a decrease in demand is caused by an increase in the price of complementary goods.

Solution: A shift of the demand curve to the left is caused by a decrease in demand.

9. A

Solution: If the realtor association predicts new housing prices to fall in a few months, the demand for houses today will decrease, and thus the demand curve shift to the left.

10. D

Solution: A rise in the price of Stevia on the demand for sugar will increase the demand for sugar, and thus the demand curve for sugar will shift to the right.

11. C

Solution: For A, a decrease in the price of a substitute of a product will decrease the demand for the product, and thus the demand curve of the product will shift to the left. For B, the report that the product has adverse health effects will decrease the demand for the product, and thus the demand curve will shift to the left. For C, an increase in the number of consumers in the market for the product will increase the demand for the product, and thus the demand curve of the product will shift to the right. For D, an improvement in production technology used by sellers will increase the supply of the product, and thus the supply curve will shift to the right.

12. A

Solution: When incomes increase, the demand for an inferior good decreases. Thus, the demand curve shift to the left. Holding other things constant, the equilibrium quantity will decrease, and the equilibrium price will decrease.

13. D

Solution: Frank charges $5 less than the market price, and thus lower his profitability by $5 per ton.

14. A

Solution: When incomes increase, people consume expensive restaurant meals more. Expensive restaurant meals by definition are normal goods.

15. A

Solution: A voluntary economic transaction will enable Juan McDonald to have a net benefit of $50 and Apple to have net loss of $50. Thus, the transaction will not occur.

16. A

Solution. Same as Question 1.

17. C

Solution: The marginal cost of an additional worker per day is $160. The marginal benefits of hiring the 1st, 2nd, 3rd, 4th, and 5th workers are $800, $600, $400, $200, and $0, respectively. When hiring four workers, the marginal benefit is higher than the marginal cost, and when hiring five workers, the marginal benefit is lower than the marginal cost. Thus, she will hire four workers at a total cost of $640 to maximize her profit.

18. C

Solution: Rising prices for printing paper will increase the supply of printing paper. Since paper producers can manufacture either printing or drawing paper, the increase in the supply of printing paper will lead to a decrease in the supply of drawing paper.

19.

a. Yes

Solution: Roger’s value of the home is lower than Donna’s value, and thus they would want to voluntarily engage in this exchange.

b. Donna: $5,000; Roger $20,000

Solution: When the exchange is made at the price of $170,000, the economic surplus for Donna is $5,000 ($175,000-$170,000) and the economic surplus for Roger is $20,000 ($170,000-$150,000).

c. $25,000

Solution: the total surplus is $25,000 ($5,000+$20,000).

20. B

Solution: The supply curve is upward sloping because marginal costs tend to be increasing as the quantities produced increase.

21. $9

Solution: A market is in equilibrium when the quantity supplied is equal to quantity demanded.

22. 160

23. $11

Solution: At the price of $11, the quantity demanded is 130 units and the quantity supplied is 200 units. The surplus equals to the quantity supplied minus the quantity demanded.

24. $11

Solution: In a perfectly competitive market, the marginal cost is equal to the market price, which is $11 for the 200th unit.

25. $11

Solution: In a perfectly competitive market, the marginal benefit is equal to the market price, which is $11 for the 130th unit.

26. 1.37

Solution: The price elasticity of demand of boats at a price of $44,500 is

27. Luxury good because PED>1

Solution: Luxury goods have a high price elasticity of demand because they are sensitive to price changes. The price elasticity for a luxury item is greater than one because a one-percent change in the price will cause a change in the quantity of more than one percent.

Question 28:

If price increased from to , the total revenue would fall. This is because, as found in question 26, this good has elastic demand at The fall in quantity will be larger than compensating increase in price.

Question 29:

At the quantity demanded of cars in 2500 and quantity supplied is 3000. That means there is a surplus (supply more than demand) of 500 (3000-2500) cars.

Question 30:

If the price of boats falls, the quantity demanded of boats increases and the demand for its complement, sunscreen, increases.

Question 31:

Question 32:

Key Words: “Mandatory”, “No substitutes”, “Only one company” Perfectly Inelastic Demand Demand does not change due to change in price Vertical demand curve Option A

Question 33:

Price elasticity of demand = 1 ( also known as unit elastic or unitary elastic) describes a situation in which a change in price results in an equally proportional change in quantity demanded.

Hence, answer is 0.12, 0.25, 1, 1.3, 2.5.

Question 34:

If the income elasticity of demand is greater than 1, the good or service is considered a luxury and income elastic. A good or service that has an income elasticity of demand between zero and 1 is considered a normal good and income inelastic. From the given options, a premium computer is most likely to be considered as a luxury.

Question 35:

Long run (that is as time passes) gives people to adapt their needs within a given budget. Hence while a sudden increase in gasoline prices might lead people to buying more gasoline because they cannot find immediate substitutes, but in long run people have options of buying fuel efficient cars, moving closer to workplace or adapting to public transport or car-pooling systems. Hence, after a price increase as time passes, people adjust to the higher price, and the demand for gasoline becomes **more elastic.**

Question 36:

This question uses the midpoint formula to calculate the elasticity.

Hence the absolute value of price elasticity of demand is **1.5.**

Question 37:

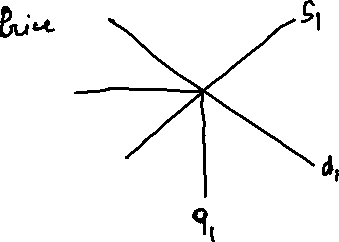
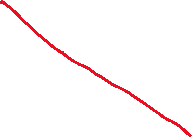
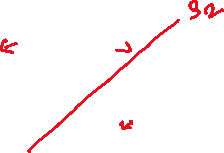
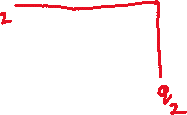
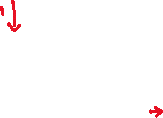
In absolute terms, the bigger the number the higher the price elasticity of demand. Hence the answer in this case is the **Dryer Sheets.**

Question 38:

Since the demand for dryer sheets is most impacted by changes in price, hence reducing their price will lead to most increase in revenue.

Question 39:

There is a decrease in demand which means at the same now a lesser quantity is demanded and there is an increase in supply which means that at the same price now more quantity is supplied. But because at a given price the decrease in demand is smaller than the increase in supply, this will lead to decrease in equilibrium price, but an increase in equilibrium price. When in doubt, always draw graphs for such a question.



Question 40:

1. At what price is the market experiencing a shortage of zero units? - At the equilibrium price! - $350
2. At what price is the market experiencing a surplus of zero units? – Again at the equilibrium price - $350
3. At what price is the market experiencing a surplus of 200 units? – Surplus means quantity supplied is more than quantity demanded: from graph at price $400, the difference between quantity supplied(600) and quantity demanded(400) is 200 units (notice surplus is when price is above equilibrium price.
4. At what price is the market experiencing a shortage of 600 units? – Shortage means more demand and less supply – has to be at a price below equilibrium: at price $200, quantity demanded is 200 units and quantity supplied is 800 units, difference 600 units, hence $200 is the answer.

Question 41:

Good X and good Y are complements in production – means their production moves up and down together in same direction.

If the price of good X increases, then producers will increase its supply (production) - option f. This will lead to more production of good y as well – option b.

Question 42:

Making trains faster and more enjoyable will lead to an increase in demand. Question does not mention any factor that might impact supply. Answer is A.

Question 43:

(i), (ii)Equilibrium is where demand equals supply. Given,

On solving,

(iii) Since $25 > $20, demand will fall, supply will rise. . Hence it will lead to surplus of 20 units.

(iv) For a higher price to exist in the market, either the demand must rise, and/or the supply must be reduced. The other part of the question says that quantity must increase as well, hence we will rule out the decrease in supply and answer would be increase in demand.

(v) Marginal cost is the additional cost of producing the next unit. We know that price equals marginal cost hence marginal cost of 15th unit is $5.

(vi) Marginal benefit is the maximum willingness to pay for a unit of good by the consumer. We can use the demand function, insert the = 15 to find P = 25.

Question 44:

Under efficient allocation, the marginal utility obtained from last unit of money spent on each of the goods should be the same. So, the marginal utility from last dollar spend on waffle is (utility from last unit of waffle divided by price of the waffles). Hence, the price of latte should be (divide the utility from last latte to the calculated utility from last unit of money to find the price).

Question 45:

Theo’s revenue from selling 28 units – 28\*2 = 56. Theo’s cost for producing 28 units = 60+40 = 100. Hence. Profit = 56-100 = -$44.

Which is a loss of $44.

Once he has paid the , for each 28 units of comic books sold, Theo is making a loss of 56-60 = . Hence, he should not produce at all.

Question 46:

From point A to C, due to increase in price of T-Shirts, consumer can not longer afford point A (Budget line has rotated inward). Hence, given the new budget line point C is the best available option (point of tangency between Budget line and highest achievable indifference curve).

Question 47:

If the price of movies is $10 dollars and maximum amount spent on movies can be , that means income of the person is Maximum number of affordable T-Shirts at price of with income is 400 units. This means that the quantity demanded of T-Shirts at price is 200 Units (read the quantities from point A).

Question 48:

From our calculation in question 47, we can say that prices were for movies and for T-shirts initially.

Question 49:

Any point that lies outside the budget constraints is not affordable for the consumers. Hence, consumer can’t consume at point B.

Question 50:

Cross Price elasticity is negative, this means that if price of one good goes up, demand for the other good goes down. Such a thing can happen only if goods are complements.

Question 51:

Note that price and quantity demanded are inversely related, hence ideally the price elasticity is written with a negative sign. Hence, the correct answer here will be -30%, that is the quantity demanded will fall by 30%.

Question 52:

Observing that items thrown in sink: none of the above (just an observation)

The belief about surface area: theory

The equation: model

The activity that gets him grounded (throwing things into the pool): empirical test

Question 53:

Price change of a substitute in production will inversely affect the quantity produced of geels and price of a complement in consumption will also inversely affect the production of geels because complement becoming cheaper means increase in demand for geels.

For option A, The price of a substitute in production of geels increased means production of geels should go down and the price of a complement in consumption of geels decreased so production for geels should increase. Hence net effect in this case is unknown.

Question 54:

Marginal utility from last dollar spent on each good should be same. If one good is giving less utility than other from the last dollar, then total utility can be increased by spending more money on good with higher marginal utility, in this case tea. Hence, the answer is C.