Detailed Solutions Sample Midterm Exam 1A

1. b

Solution: Please refer to the slides of Module 1. Theories explain mechanisms of action. Models simplify the concept and is usually manipulatable or tangible in some way.

2. d

Solution: Please refer to the slides of Module 4. The price elasticity of demand reflects the availability of substitutes. It is larger in the following circumstances: 1. When there are more competing products. 2. For specific brands than broad categories. 3. For things that aren’t necessities. 4. When consumers search more. 5. When there’s more time to adjust.

3. b

Solution: An increase in the price of zucchini will increase the quantity supplied of zucchini and decrease the quantity demand of zucchini. Because Squash and zucchini are substitutes in production, increase the quantity supplied of zucchini will decrease the supply of squash.

4. c

Solution: The marginal benefit is equal to the price. We know that the price of selling 400 muffins is $3, and thus the marginal benefit of selling 400 muffins is $3. The producer maximizes his profit if the marginal cost is equal to the marginal benefit.

5. a

Solution: The sunk cost is $400,000 because the consultant should be paid whether or not the program moves forward. This program is worth implementing at the college because the revenue ($800,000) is higher than the cost ($500,000). The implicit costs are opportunity costs.

6. d

Solution: For a, increase in supply will shift the supply curve to the right, and thus there will be lower price and higher quantity sold in the equilibrium. For b, increase in demand will shift the demand curve to the right, and thus there will be higher price and higher quantity sold in the equilibrium. For c, decrease in demand will shift the demand curve to the left, and thus there will be lower price and lower quantity sold in the equilibrium. For d, decrease in supply will shift the supply curve to the left, and thus there will be higher price and lower quantity sold in the equilibrium.

7. c

Solution: For a, fewer buyers of the good in the market will decrease the demand for a good. For b, decrease in the price of the good will increase the **quantity demand** of the good instead of the demand of the good. For c, buyers will buy more today if they expect the price of the good to increase in the future, and thus the demand for the good will increase. For d, increase in incomes for an inferior good will decrease the demand for the good.

8. d

Solution: Positive economics describes and explains various economic phenomena, while normative economics focuses on the value of economic fairness or what the economy should be.

9. d

Solution: Along a linear demand curve, as price decreases, demand gets less elastic. At very high prices, people are very responsive to any lowering of the price. But at lower prices, they become less sensitive to price changes.

10. c

Solution: Price Elasticity of Demand measures by what percent the quantity demanded will change following a 1% change in price. The price elasticity of demand is negative because price and quantity changes always move in the opposite direction. Since the price elasticity demand of -2.5, the quantity sold will decrease by 25% if the price increases by 10%.

11. d

Solution: The consumer could afford 20 units of A and 0 units of B, and thus his income is $20\*5=$100.

12. b

Solution: For a, the bundle labeled 4 is outside the budget constraint, and thus is not affordable. For b, the bundle labeled 3 is an optimal choice because it is affordable and provides the highest utility. For c, bundles 1 and 2 are at the same indifference curve and thus provide the same level of utility. For d, both bundle 1 to bundle 3 are affordable, while bundle 3 provides a higher utility. Thus, the consumer would be better off if they switched from bundle 1 to bundle 3.

13. d

Solution: Since the firm can keep more inventory on hand than it was able to before, it’s now more sensitive to the price. When the price is low, it can store the good for future sale rather than selling them at the low price. When the price is high, it can sell much more than before because of more inventory. That’s, the supply curve becomes more elastic.

Question 14:

Since the price elasticity of demand is elastic (1.4>1), we can say that the total revenue will fall due to increase in price.

We can see it mathematically as well:

Let’s say price earlier was and quantity sold was , so revenue was . New price = and New Quantity = , hence the new revenue is: .

We found a decrease in the revenue. **Answer is a.**

Question15:

If this is an optimal bundle then the utility from the last dollar spent on shoes and toys should be same.

**Answer is d.**

Question 16:

Money is not an economic resource. Money cannot be used by itself to produce anything as it is a medium of exchange for economic resources.

**Answer is b.**

Question 17:

Cost of production has increased that means supply curve will shift upward. Suppliers will supply less quantity at the same price now. In graph V supply curve shifts outward.

**Answer is d.**

Question 18:

A rational consumer is one that maximizes his utility given the resources at hand. That involves using all resources available for use hence ‘a’ is wrong. Any mix of goods that uses up all the income might not give maximum utility because you might like some other good more than what is used to create the bundle, hence ‘c’ is not correct. ‘d’ is also incorrect because we care about marginal utility instead of average utility when trying to maximize the utility.

**Answer is b.**

Question 19:

We can categorize goods as normal, inferior or necessity when we are studying changes in quantity demanded with respect to change in individual income. Here, we are looking at positive relation between change in price of one good and change in quantity demanded of another good (0.25 is a positive number). This positive cross price elasticity implies that an increase in price of one good leads to an increase in the demand of the other good. We know that such a phenomenon can occur only when the two goods are substitutes to each other.

**Answer is b.**

Question 20:

Perfectly Inelastic demand means there will not be any change in quantity demanded, hence no increase in quantity sold as well. A decrease in demand will also lead to decrease in quantity sold. Hence, Supply increases in a market with perfectly elastic demand is the right answer. Perfectly elastic demand means the demand curve is horizontal and thus supply increases in a market with perfectly elastic demand will not decrease the price and will cause the largest increase in quantity sold.

**Answer is a.**

Question 21:

Let’s first calculate the equilibrium price and quantity:

Since $23 is less than 41, there will be shortage. At $23, quantity supplied is 6 ( and quantity demanded is 21 . Hence, there is a shortage of 15 units. In equilibrium, we know that price will rise.

**Answer is b.**

Question 22:

As calculated above:

**Answer is b.**

Question 23:

Using Price = MC rule and the supply equation, at Q= 15, P = $50.

**Answer is d**.

Question 24:

We know that is consumption of a good decreases due to increase in income, it is an inferior good. And also, since the relation between income and quantity demanded is negative, income elasticity of demand is negative. Hence answer should be d. you can also calculate the elasticity using formula:

**Answer is d.**

Question 25:

Perfectly elastic demand means a slight change in price will lead to infinite change in quantity demanded. Such a change is only possible if the demand curve is horizontal.

**Answer is b.**

Question 26:

* incomes of shoe buyers fall, and shoes are considered inferior goods: this means that quantity of shoes purchased should go up, leading to a price rise.
* sellers expect the price of shoes to fall in the future: This means that sellers will want to sell more at current prices so increase supply but increased supply will drive prices down.

Hence, quantity traded in market rises as a result of both events but price has two different effects and hence the ultimate impact on prices is unknown.

**Answer is b.**

Question 27:

The Law of demand is a fundamental principle which states that there is an inverse relationship between price and quantity demanded. In other words, law of demand states that as price goes up, quantity demanded goes down or larger quantities will be demanded only if price is lower. This is because the more people consume of a good, the lesser they need more of it, and hence they will buy more only if next unit is cheaper than the previous. This is exactly what is diminishing marginal utility.

**Answer is d.**