Q1: In the village of Frankfurter, the demand function for sausages per person is D(p)=20-1.5p, where p is the price of a single sausage. The present population of Frankfurter is 100 persons. Suppose that 10 more people move into town, each of whom has the same demand function as the old residents. At a price of $2 the price elasticity of demand for sausages in Frankfurter is:

A. increased by 10 percent.

B. decreased by 10 percent.

C. unchanged.

D. increased by 15 percent.

E. none of the above.

Qd=2000-150P

Ed=-150.=

Q’d=2200-165P

E’d=-165.=

Q2: Bus ticket price in a city is 1 and the amount of ticket sold is 10,800. The price elasticity of demand for the bus ticket is -0.6 and the price elasticity supply of bus ticket is 1. If the demand for the bus ticket increase by 10%, then its price is nearly?

1. 1.06
2. 1.04
3. 1.02
4. 1.08
5. None of above

Demand function: Qd=a-bP

Ed=-0.6=-b. ⬄ b=6480 => a=17280

* Demand for bus ticket: Qd=17280-6480P

Supply function: Qs=c+dP

Es=1=d.⬄ d=10800 => c=0

* Supply function: Qs=10800P

Demand increase 10% => Q’d=1,1Qd=19008-7128P

Q’d=Qs ⬄ P=1.06 ; Q=11452

Q3: If the demand function is q = m-2(ln p) over some range of values of p; then at all such values of p the absolute value of the price elasticity of demand:

1. Is constant as p change
2. Decreases as p increase
3. Increase as p increase
4. Increase with p as small values and decrease with p as large values
5. None of above

Ed=

When p increase, lnp increase => m-2lnp will decrease => will decrease. The absolute of Ed= will increase.

Q4: Given the present output of 100, a perfectly competive firm has a fixed cost of 100, its marginal cost is 7 and equal to its average cost. The present price of this product is 6. Then, in order maximize profit the firm should

1. Maintain its present level of output
2. Lower its present level of output
3. Lower its output price
4. Raise its output price
5. None of above

AFC=1; ATC=7 => AVC=6

P=6 < MC

* At this price, firm gaining loss. Therefore, lowering its output will maximize profit (when lower q, MC will decrease until MC=P=6)

Q5: The production function of a firm is q=50+20L. If w=15, the marginal cost of producing the 10th unit of product is

1. 1.33
2. 0.75
3. 300
4. 20
5. None of above

TC=wL=15.

* TC=0.75q-37.5 => MC=0.75

Q6: The utility function of miss H is U(X,Y)=min(X+2Y,Y+2X). She consumes 10 units of X and 20 units of Y. If the price of X is 1, the income of miss H is

1. 40
2. 50
3. 20
4. 30
5. None of above

Q7: A market has a demand function of Q=18-0,25P. If this market is controlled by a monopoly who has a cost function of TC=2, consumer surplus (CS) will be less than that in case where this market is a perfectly competive market by a value of

1. 62
2. 62,5
3. 63
4. 63,5
5. None of above

Monopoly: TR=P.Q=(72-4Q).Q=72Q-4

* MR=TR’= 72-8Q
* MC=4Q+12
* To maximize profit, firm have to set MR=MC

⬄ 72-8Q=4Q+12

⬄ Q=5; P=52

Consumer surplus in Monopoly market: CS=

Competitive: P=MC

* 72-4Q=4Q+12
* Q=7,5; P=42

Consumer surplus in Competitive market: CS=

* Consumer surplus (CS) will be less than that in case where this market is a perfectly competive market by a value of 62.5