This is a Class 1 exam

Lebanon Evangelical School
for Boys and Girls
Loucizeh - Baabda

Stage Exam 04
27MAR2023

Do NOT write in this box. Your MARK will be placed here.

Subject :	Economics
Class :	11SE
Teacher :	Amal Bejjani
Duration :	1 hour

Your name :		*Time taken to complete exam*
Your Class :		
Exam Room :		
How many sheets, including cover sheet :		

- Do not open this paper until the teacher in charge instructs you to do so.
- The most important thing to remember in taking an exam is NEVER PANIC.
- If you are caught cheating in this exam, you will be awarded zero for ALL exams that are taken on this day.

1. As the minimum salary of people in Lebanon increased from 200$ to 500$, their quantity demanded for shawarma sandwiches increased from 100 sandwich per day to 150 units per day. Calculate income elasticity and explain your answer.(4pts)

2. An increase in price of product X from 1000 $ to 1500$ lead to an increase in the quantity of the product from 10 to 20 units. Calculate demand elasticity and explain your answer. (4Pts)

3. Prices of bicycles have increases in a given country as a result of the increase of demand on this product and the decrease of supply. This occurred after an awareness campaign launched by the government in order to decrease the consumption of gasoil and protect the environment.

3.1 Explain the behavior of producers in this situation clarifying the relation between the production and the prices(2pts)

3.2 The price elasticity of bicycles is 1.2 following a variation(change) of price of 20%. Calculate the relative variation of the production (% change in supply) and analyze the result.(4pts)

4. The production function "Q" for a given product is Q = 15P - 30 and the price is 20mu. Due to an increase of the price, at a latter stage , the quantity produced doubled. Calculate:

4.1 The new quantity produced and the new price.(2pts)

4.2 The price elasticity or production and analyze the result.(3pts)

5. The demand on a product (A) increased from 200 to 240 units, when the price of the product (B) decreased from 100 to 80 mu.

5.1 Calculate the cross elasticity of demand of products A and B.(3pts)

5.2 Specify the relation between the 2 products (A) and (B) (2Pts)

6. Assume that a given company is producing copybooks and started adding workers from zero until 7. The level of output has changed according to the given : 0, 50, 120, 220. 270, 290, 250, and 200 units of copybooks.

6.1 Draw a table and calculate the Marginal product for each labor (2pts)

6.2 Identify the 3 stages of productions and name them on the table(3pts)

6.3 Define the 3 stages of production.(3pts)

7. According to the table below ,a company is producing decorative candles. The price of each candle is 4$. The quantity produced is given in the table. (Please answer this table on the question paper)

Quantity/in units	Total Revenue(in $)	Marginal Revenue(in $)	Total Cost (in $)	Marginal Cost($)	Total Profit($)
0			62		
10			90		
20			110		
30			126		
40			138		
50			150		
60			165		
70			190		
80			230		
90			296		
100			400		
110			550		
120			715		

7.1 Complete the table with the Total Revenue(TR), Marginal Revenue(MR), Total Cost(TC), Marginal Cost (MC) , and Total profit (TP) (12pts)

7.2 Identify the breakeven point and justify your answer (3pts)

7.3 Identify the profit maximization point and justify your answer.(3pts)

1. YED = 150-100/100

   ---------- = 0.5/1.5 = 0.3

   500-200/200 2pts

   1> 0.3 >0 So it is a normal necessity which means a change in income leads to a smaller change in Qd

1. PED= 20-10/10

   ---------- = 1 / 0.5 = 2 >0 so it is abnormal demand

   1500-1000/1000 2pts

2.

2.1 As price increases then supply increase and vs 2pts

2.2 The price elasticity of bicycles is 1.2 following a variation(change) of price of 20%. Calculate the relative variation of the production (% change in supply) and analyze the result.

PES = %change in Qs/ % change in P

1.2 = x / 0.2 so x= 0.24 or 24%

PES = 1.2 > 1 elastic supply (a change in price leads to a larger change in Qs) 4pts

3. Q1 = 15 x 20 – 30 = 300-30 = 270 units

Q2 = 2 x270 = 540 units

Q2 = 15 P -30

540 = 15 P -30

570 = 15 P so p = 570/15 = 38 which is P2

3.1 PES = 540-270/0270 / 38 -20/ 20

PES = 1.11 which is greater than one so the product is elastic supply which means a change in price leads to a larger change in Qs 2pts

4. CED = 240-200/200 : 80-100/100 = -1 < 0 so the 2 products are complements

As price of B decreased, demand for A increased 4pts

5.

No of workers	Total product	Marginal product
0	0	0
1	50	50
2	120	70
3	220	100
4	270	50
5	290	20
6	250	-40
7	200	-50

½ pt for each.

From 0 to 3 workers: stage I(increasing returns): as labor is added , output increases at an increasing rate and MP increases

From 4 to 5 workers: Stage II(diminishing returns): as labor is added, output increases at a decreasing rate and MP decreases

From 6 to 7 workers: Stage III(negative returns): output decreases and MP becomes negative

6. According to the table below ,a company is producing decorative candles. The price of each candle is 4$. The quantity produced is given in the table.

Quantity/in units	Total Revenue(in $)	Marginal Revenue(in $)	Total Cost (in $)	Marginal Cost($)	Total Profit($)
0	0	-	62	-	-62
10	40	4	90	2.8	-50
20	80	4	110	2	-30
30	120	4	126	1.6	-6
40	160	4	138	1.2	22
50	200	4	150	1.2	50
60	240	4	165	1.5	75
70	280	4	190	2.5	90
80	320	4	230	4	90
90	360	4	296	6.6	64
100	400	4	400	10.4	0
110	440	4	550	15	-110
120	480	4	715	16.5	-235

6.1 On table

½ pt for each

6.2 The breakeven point is between the level of output 30 and 40 units. Since at this level total profit is equal to zero. As TR= TC 3pts

6.3 At the level of output of 80, Since MC=MR= 4 (6) 3pts