Part One: Cost Theory

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Paul Krugman and Robin Wells	11
Paul A. Samuelson and William D. Nordhaus	07
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1. Explain Explicit and Implicit Costs.

2. Explain the difference between accounting profit and Economic profit.

3. Your accounting reports show that the company's total revenue in the specified period is 50,000 Taka. You have spent 10,000 Taka as total expenses for labor wages and 5,000 Taka as the cost of goods sold. The company could take up a new project but did not. This project could have fetched them more money, but they missed the opportunity. The opportunity cost was worked out and the implicit cost of that bad decision is 10,000 Taka. Calculate Accounting and Economic Profit.

4. Mr. X currently works for a marketing firm. He is considering opening his marketing firm, where he expects to earn 20,00,000 Taka per year once he gets established. To run his firm, he would need an office and four workers. He has found the perfect office, which rents for 250,000 Taka per year. Per workers could be hired for 3,00,000 Taka per year. To open his marketing firm, Mr. X would have to quit his current job, where he is earning an annual salary of 10,00,000. Calculate Explicit and implicit costs and find out the accounting and economic profit. Comment on whether opening a marketing firm be profitable for Mr. X or not.

5. Calculate TC, MC, AFC, AVC, ATC and draw the graphs of TFC, TVC and TC in one diagram and corresponding MC, AFC, AVC and ATC in another diagram.

Quantity of Output	Total Fixed Costs	Total Variable Costs
0	60	0
1	60	20
2	60	30
3	60	45
4	60	80
5	60	135

6. Calculate TR, TC, Profit, MC, AFC, AVC, ATC and draw the graphs of TFC, TVC and TC in one diagram and corresponding MC, AFC, AVC and ATC in another diagram.

P	Q	TR	TFC	TVC	TC	Profit	MC	AFC	AVC	ATC
3.5	0		150	0						
3.25	100			300						
3	200			500						
2.75	300			650						
2.5	400			750						
2.25	500			830						
2	600			905						
1.75	700			995						
1.5	800			1110						
1.25	900			1260						
1	1000			1460						

7. Fill in the blanks

Output	TFC	TVC	TC	MC	AFC	AVC	ATC
100		60	260				
200				.30			
300						.50	
400							1.05
500		360					
600				3			
700						1.60	
800			2040				

8. Suppose a company has 5 units of fixed capital and each capital cost 100 Taka. For their production purposes, they need labor, variable input. Each variable input cost 200 Taka.

Q	Capital	Labor	P	TR	TFC	TVC	TC	Profit	MC	AFC	AVC	ATC
0		0	50									
10		2	45									
20		4	40									
30		6	35									
40		8	30									
50		10	25									
60		12	20									
70		14	15									
80		16	10									
90		18	5									
100		20	0									

❖ Calculate TR, TFC, TVC, TC, Profit, MC, AFC, AVC, ATC

9. Fill in the blanks

Q	FC	VC	TC	MC	AFC	AVC	ATC
0							
5						120	180
10		800	1100	40			
15	300			92	20		
20			2100		15		105
25		2500				100	112
30			3750	190		115	

10. Explain why the AFC curve declines continuously.

11. Why ATC curve is U-shaped?

12. Draw and explain that the MC curve intersects ATC at a minimum.

13. Draw and explain that the MC curve intersects AVC at a Minimum.

14. Draw and explain why the MC curve intersects both ATC and AVC at the minimum point.

15. Will ATC and AVC curves touch each other?

16. Draw and explain the relationship between MC and MP.

17. Mathematically prove that MC is inversely related to MP.

18. Explain that the rising portion of the MC curve reflects the law of diminishing returns

19. Draw and explain the relationship between AP and AVC.

20. Mathematically prove that AVC is inversely related to AP.

21. Explain the difference between Fixed cost and Sunk cost.

Part Two: Market Theory

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Paul Krugman and Robin Wells	12,13,14,15
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Perfect Competitive Market

01. What is a Market? Explain with an example.

02. How many types of markets exist? Describe each of them based on the number of producers, type of product, market share and control etc.

03. Explain what Perfect Competitive market is.

04. What are the characteristics or conditions of a Perfect competitive market?

05. Why firms are price takers in a perfectly competitive market?

06. Explain why a firm's demand curve in a perfectly competitive market is elastic.

07. Draw and explain the profit-maximizing condition in a perfectly competitive market.

08. Producing at P =MC is the profit-maximizing condition in a perfectly competitive market. Use a diagram to explain.

09. Why does production at MC = MR point gives profit-maximizing output for a producer who operates in a perfectly competitive market? Use a diagram to explain.

10. Why it is optimal for a firm that operates in a perfectly competitive market to produce at the point where price intersects the marginal cost curve?

11. Draw and Explain the Super Normal Profit situation in a perfectly competitive market.

12. Draw and explain the loss situation for a perfectly competitive market.

13. Draw and explain the zero-economic profit situation in a perfectly competitive market.

14. Why does a producer in the long run produce at zero economic profit situation in a perfectly competitive market?

15. What is the profitability condition in a Perfectly competitive market?

16. Draw and explain the Shutdown situation in a perfectly competitive market.

17. Draw and explain the Loss minimization situation in a perfectly competitive market.

18. What is the Production condition in a perfectly competitive market?

19. Why marginal cost curve is the firm’s supply curve in the short run, Draw and explain.

20. Calculate Total Revenue (TR) Marginal Revenue (MR), Marginal Cost (MC) and Profit

Quantity	Price	Total cost	Total revenue	MR	MC	Profit	Change in Profit
0	6	62					
10	6	90					
20	6	110					
30	6	126					
40	6	144					
50	6	166					
60	6	192					
70	6	224					
80	6	264					
90	6	324					
100	6	404					

21. Calculate Total Revenue (TR), Marginal Revenue (MR), Marginal Cost (MC) and Profit

Quantity	Price	Total Revenue	Total Cost	MR	MC	Profit	Change in Profit
0	4		62				
10	4		90				
20	4		110				
30	4		126				
40	4		138				
50	4		150				
60	4		165				
70	4		190				
80	4		230				
90	4		296				
100	4		400				
110	4		550				
120	4		715				

Imperfect Market

Monopoly, Monopolistic Competition, Oligopoly

1. What are the properties or conditions for Monopoly?
2. Why does a producer or firm face legal barriers to entry and exit in a monopoly market?
3. Explain the difference between Natural monopoly and Pure monopoly.
4. Why in natural monopoly does a firm have decreasing Average Total Cost (ATC)?
5. How does a monopoly producer set the market price of the product?
6. Explain that the Monopoly firm produces at the elastic part of the demand curve?
7. Draw and explain the profit-maximizing condition for a monopoly firm
8. Draw and mathematically prove the profit-maximizing condition for a monopoly.
9. What is the Social Cost/Dead-Weight Loss/Inefficiency of Monopoly? Explain your answer with the help of a diagram.
10. Compare the efficiency between a Monopoly and a Perfect competitive market with the help of a diagram.
11. Suppose the below table gives the price, quantity, and cost information of a monopoly firm. Now, calculate Total Revenue (TR), Marginal Revenue (MR), Marginal Cost (MC) and change in Profit. Also, find the profit-maximizing output for this monopoly firm.

Quantity	**Price**	**Total Cost**
1	1,200	500
2	1,100	750
3	1,000	1,000
4	900	1,250
5	800	1,650
6	700	2,500
7	600	4,000
8	500	6,400

12. What are the properties or conditions for Monopolistic Competition?
13. What are the properties or conditions for an Oligopoly market.
14. What is Duopoly?
15. What is Monopsony?

Part Three: Factor Demand

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1) What is the difference between the Factor of Production and Input?

2) Why is Labor Demand called Derived Demand?

3) Draw and explain the profit-maximizing condition of labor demand for a firm?

4) Calculate the marginal product of labor (MP_L), the value of the marginal product (VMP_L), and marginal profit from the table below. Assume the Price of the product is 100 Taka and the wage rate is 1000 Taka. Finally, Draw the firm's demand for labor.

Labor	**Output**
0	0
1	70
2	130
3	190
4	250
5	280
6	290
7	295

5) Calculate the marginal product of labor (MP_L), the value of the marginal product (VMP_L), and marginal profit from the table below. Assume the Price of the product is 10 Taka and the wage rate is 2000 Taka. Finally, Draw the firm's demand for labor.

Labor	**Output**
0	0
1	300
2	700
3	1200
4	1800
5	2300
6	2700
7	3000
8	3200
9	3300
10	3300

6) What are the shifting factors of the labor demand curve?

7) Suppose with the given wage rate (W^*) of labor a Steel Manufacturing firm's demand for labor is Q^*, which is a profit-maximizing amount of labor. Now, what will happen to the labor demand curve of this firm if the below situation occurs? Explain your answer with a proper labor demand curve.

a) Government increases the minimum wage rate from 8000 Taka to 12000 Taka.
b) Market price of Steel decreases by 15%.
c) Steel manufacturing company replaces all its old machines with new and updated ones.
d) Company installs more machines for the workers to work with.

8) Draw and explain the relationship between wage rate and the supply of labor.

9) Draw and explain the shape of the labor supply curve when the market wage rate increases more.

10) What are the shifting factors of the labor supply curve?

11) Suppose with the given wage rate (W^*) the supply of labor is Q^*. Now, what will happen to the labor supply curve and quantity supply of labor if the below situation occurs? Explain your answer with a proper labor supply curve.

a) More women are participating in the labor force.
b) Wage rate in the RMG industry is higher compared to working as Rickshaw-Puller. What will happen to the supply of Rickshaw-Puller?

12) Suppose with the given wage rate (W^*) the demand and supply of labor in the RMG industry is Q^*, which means the labor market is in an equilibrium situation for the RMG industry. What will happen to the labor supply curve or labor demand curve and the quantity of labor if the below situation occurs? Explain your answer with a proper diagram.

a) Minimum Wage rate in the RMG industry increases.
b) Women are more likely to work in the RMG industry rather than in Household.

Ricardian Rent Theory

1) Explain the Ricardian Rent Theory.

2) What are the Assumptions of the Ricardian Rent Theory?

3) What are the Criticisms of the Ricardian Rent Theory?