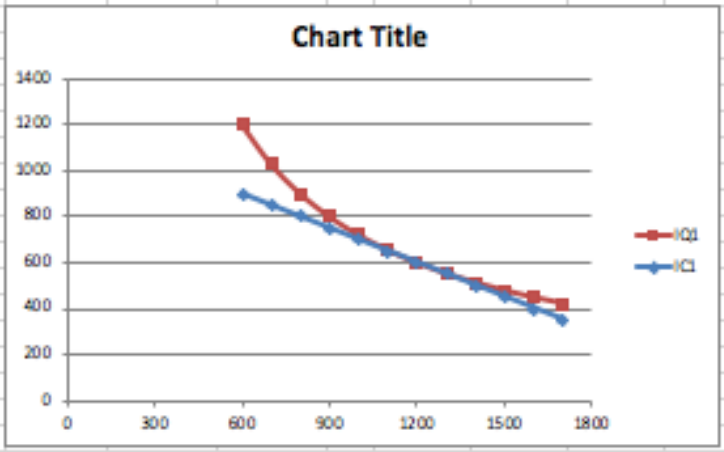
T4

PART1
MC1) A
MC2) B
MC3) A

Q1
a/c)

Production function:		Y = 4 L^(0.5) K^(0.5)		Budget:	48000
Output target:		3394		PL	20
				PK	40
	IQ1	IC1			
L	K=	K=			
600	1200	900			
700	1029	850			
800	900	800			
900	800	750			
1000	720	700			
1100	655	650			
1200	600	600			
1300	554	550			
1400	514	500			
1500	480	450			
1600	450	400			
1700	424	350			



b)
$Y = 4\sqrt{L}\sqrt{K}$
$Y / 4\sqrt{L} = \sqrt{K}$
$(Y / 4\sqrt{L})$ ^2 $= K$

d)
(i) K = 600 L = 1200 is cost minimising production plan
(ii) Cost of plan on IC1=$48,000
20(1200) + 40(600) = $48,000

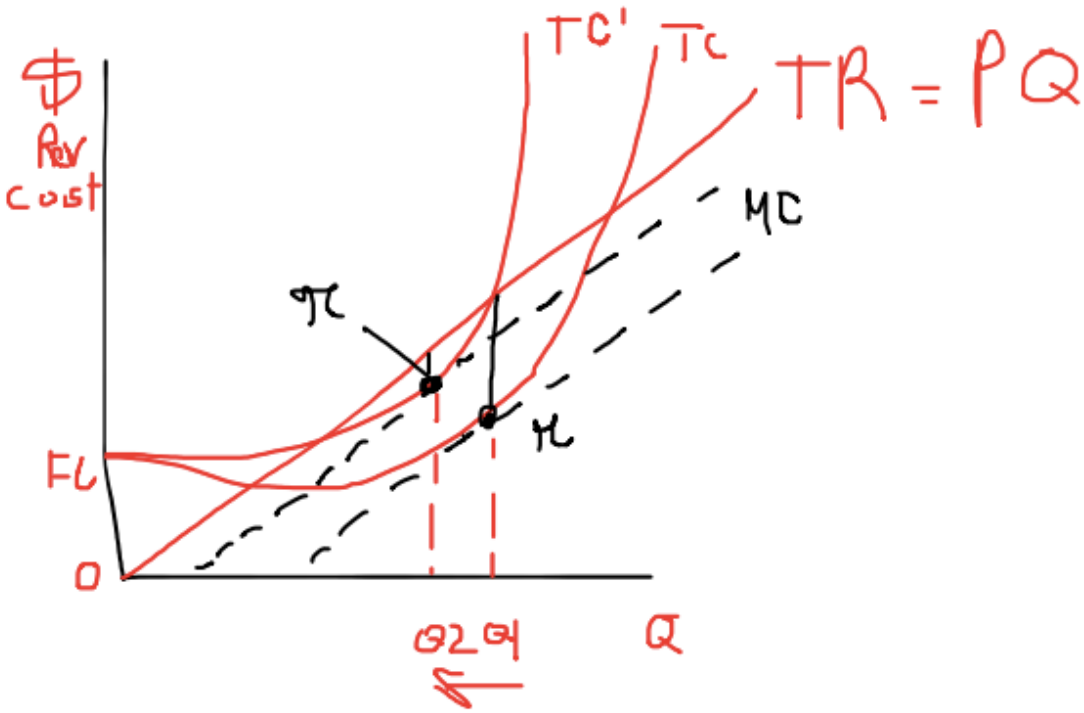
Q2
Why change?
-protect environment
-protect workers health
-pre-empt regulation
Why continue?
-lower cost
-profitability

Rights
Property rights undermined but this must be balanced against worker rights and environmental concerns

Method for change
-subsidise alternative technology
-increase tax on methyl Bromide

Consequence
-higher prices and less competitive exports

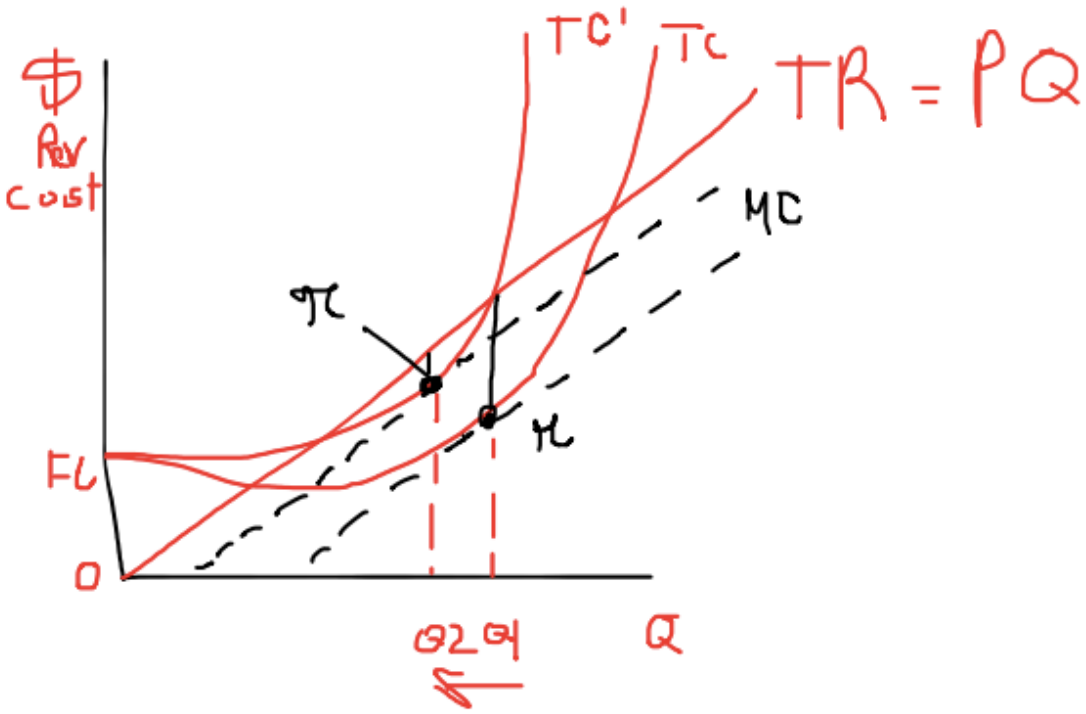
Q3
1. In a diagram, draw a total cost and total revenue curve for a firm in a perfectly competitive market. Explain what each of the curves represents.



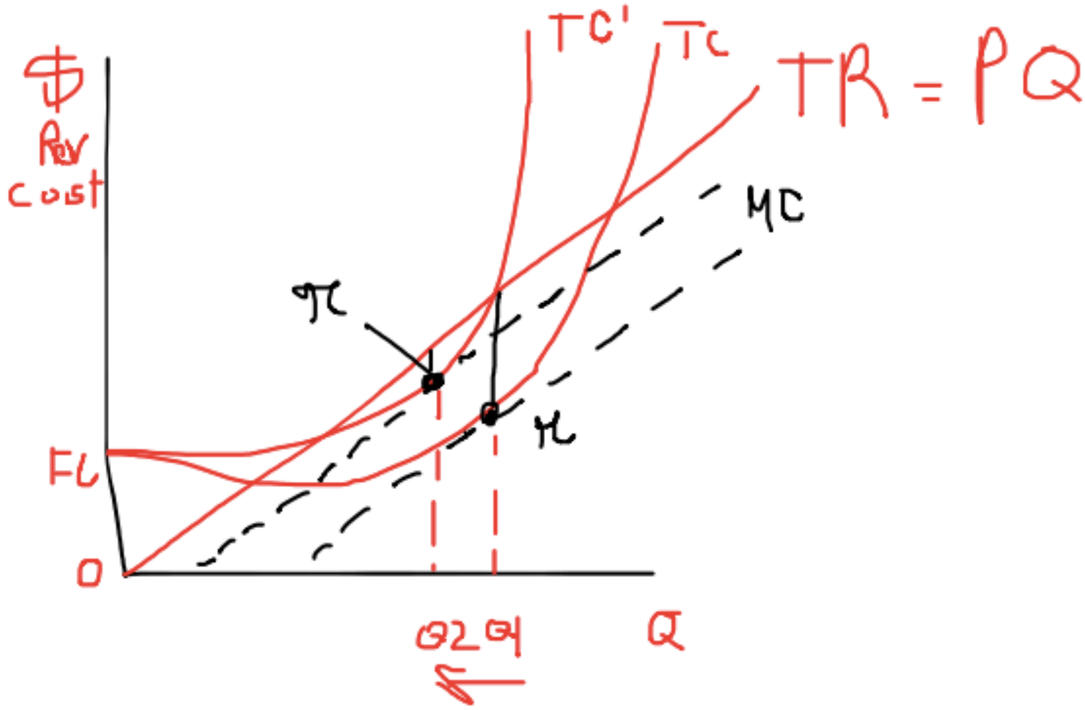
2. Discuss the relationship between: (a) total revenue and marginal revenue; (b) total cost and marginal cost.
a)MR is the slope of TR in our case MR=P, graphically MR is the slope of the TR

curve
b) MC & TC, graphically MC is the slope of the TC curve (change in TC/ change in Q)
MC is increasing due to diminishing returns

3. Explain how a firm chooses a profit-maximising level of output. Illustrate this level on an appropriate diagram.
TC Max at MR=MC
if MR>MC the firm should increase production to maximise profit
If MR<MC the firm should produce less to minimise loss



4. Show and explain how an increase in the wage that the firm pays its workers would affect the firm's profit-maximising level of output. Assume that demand for the firm's product remains constant.
When wage increases marginal cost increases which causes quantity to decrease from Q1 to Q2 and TC to decrease


$
Rev
cost
TC'
TC
TR = PQ
MC
π
π
FC
O
Q2 Q1
Q