

Instructions

- (1) Please read the instruction carefully.
- (2) Please read each question carefully and answer the questions straightforwardly. Always provide economic reasons at least a paragraph for your analysis, or a graph when necessary, even when the question does not indicate so.
- (3) Handing and submitting assignments are only available via BE Moodle.

Answering the questions and preparing answer sheets

- (1) Answers are to be handwritten, in either digital or analog form, in a blank canvas or any clean paper. Make sure that your handwriting is clearly visible and readable.
- (2) There is no need to rewrite the question. Just indicate the question number clearly for each of the answer, such as 1.a).
- (3) When done, for the digital case, collage all the pages into a single PDF file. For those who write on sheets of paper, take photo of all pages then convert all of them into a single PDF file as well.
- (4) Name your PDF file as StudentID_YourNickname, such as 640123456_Bo.

Submitting your answers

- (1) Make sure your file does not exceed 10MB. This is the maximum file size for BE Moodle upload.
- (2) Login to BE Moodle, head into the course, then the assignment topic.
- (3) Choose your file to submit. Done. There will be timestamp for your upload date and time, so please make sure to not submit later than that.

1. Assumed both a product market and a labor market are perfectly competitive, a table of marginal product is given below.

Unit of labor	Marginal product of labor
2	12
3	8
4	6
5	4
6	2

This product can be sold in the market for \$12 each while labor wage is \$48, answer the following questions clearly.

1.a) Figure out how many units of labor this firm will choose as input for its production to maximize profit. Illustrate a graph to support your answer and explain.

1.b) Supposed that there is a sudden economic recession driving consumers' purchasing power downward, what would happen to the units of labor hired by this firm? Support your answer with illustrations that also show a connection between product market and labor market.

2. In a telecommunication sector where there are 3 companies namely A, D and T, at first, these companies can capture 50%, 20% and 30% of market share respectively. All of them share the same marginal cost of \$0.2 on average for a unit of service per minute. Answer the following questions

2.a) If company A can charge users for \$1 on average for a unit of service, figure out the Lerner's index for company A.

2.b) Figure out the HHI index for this industry at the current state.

2.c) If D and T decide to merge their companies, figure out the new HHI index.

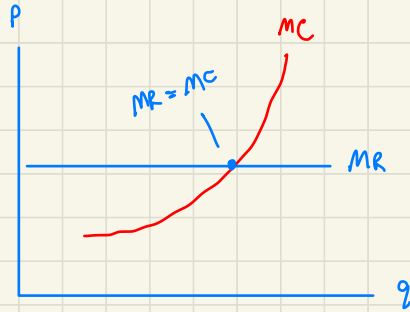
①

48

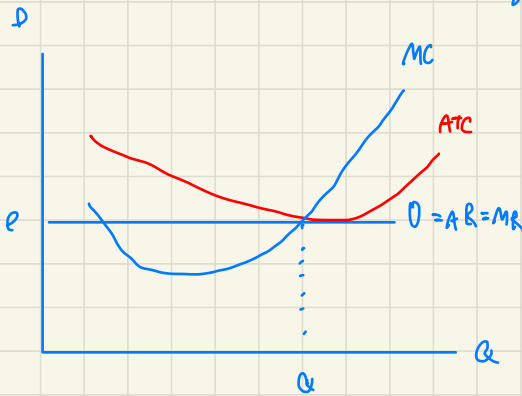
12

Unit of labor		Marginal product of labor	
2	96	12	192
3	144	8	96
4	192	6	72
5	240	4	48
6	288	2	24

$MR = MC$ condition that we can find the optimal quantity that will maximize π



②



When price is less than average total cost, firms are making loss. Over the long-run, if firms in a perfectly competitive market are earning negative economic profits, more firms will leave the market, which will shift the supply curve left. As the supply curve shift-left the price go up. Then the number of labor hired will be increase

② a)
$$L_A = \frac{P - MC}{P}$$

$$= \frac{1 - 0.2}{1} = 0.8$$

b)
$$H = \sum_{i=1}^3 s_i^2 = (0.9)^2 + (0.2)^2 + (0.3)^2 = 0.25 + 0.04 + 0.09 = 0.38$$

c)
$$H = \sum_{i=1}^2 s_i^2 = (0.5)^2 + (0.5)^2 = 0.25 + 0.25 = 0.5$$

③ a) Market failure - The price of sin goods may add the cost of externalities to

b) Not a Market failure - not related to what we have studied

c) Moral Hazard - full benefit was some thing both parties mutual agree but after contract were signed, employer doesn't follow the agreement

d) Public good - It's something that should be provide by the government as it is non excludable and non-rivalry

e) Market power - Brand image is a luxury good and has a longer market share internationally

3. Consider these statements and indicate which one of the choices fits with each statement and roughly explain why.

Choices

1. Not a market failure
2. Market power
3. Externalities
4. Public goods
5. Moral hazard
6. Adverse selection

3.a) People feel that price level is hiking.

3.b) Morpheus always hears a loud fight coming from a room next to his.

3.c) Trinity does not receive her full-benefit until her first 3-month of her work position.

3.d) In Chiang Mai, there is no earthquake alarming system.

3.e) Starbucks coffee is more expensive than Amazon coffee.
