INSTITUTE OF ACTUARIAL & QUANTITATIVE STUDIES

Subject: BEM

Chapter:

Category: Assignment 2 solutions

Answer 1 –

i) Explicit costs: Staff wages, Loan interest, rent and cost of inventory sold
Implicit costs: Depreciation, Opportunity cost of Mr Raju's money and time

ii) This is the profit that Mr Raju need to make to prevent him from closing down in the long run.
It is the opportunity cost of his time and money
Here it is INR 8,00,000 + INR 48,000= INR 8,48,000

iii) Treating normal profit as a cost Mr Raju made an economic profit of
INR 9,50,000 – (INR 8,00,000 + INR 48,000)= INR 1,02,000

iv) Assuming the numbers remain same the next year
By selling the bookshop he could earn an interest of 48000/750000*800000 that is INR 51,200
Along with his software engineering job he can earn 8,00,000. On the total he can earn INR 8,51,200.
By keeping a shop he can earn INR 9,50,000. Hence He should not sell the book shop the next year

v) Mr Raju Account in year 2
Accounting Profit
INR 8,75,000
Less opportunity cost of Mr Raju's Time (potential salary of software engineer)
INR 8,77,000
Less opportunity cost of Mr Raju's Money (interest income foregone)
INR 50,000
Economic Profit
INR (-52,000)
Mr Raju is not going to like the results this year

Answer 2 –

The three ways are:
Exploitative Abuse:
Business practices that directly harms the customers
e.g. When a firm produces lower output and make a larger profit.
An example could be the OPEC cartel which produces lower output to make a larger profit
Exclusionary abuse:
Business practices that limit or prevent effective competition from either actual or potential rivals
e.g. Predatory pricing
An example could be China dumping cheap goods into Indian market to drive Indian manufacturers out of business
Restrictive Practices:
When two or more firms agree to adopt common practices to restrict competition
An example could be sharing of markets between two firms and none of the firm would poke nose in another's market

Answer 3 -
Possible ways for governments to regulate monopolies and oligopolies (Other possibilities exist and may be awarded marks):
- Controlling the level of output e.g. demanding that the socially optimal output level is produced)
- Controlling prices e.g. setting a maximum price such that the monopolist would then choose to produce the socially optimal level of output.
- Breaking up monopolies or making monopolies illegal
- Preventing mergers that would lead to monopolies
- Allowing monopolies, but taxing them heavily, and using the taxes to pay redistributive benefits
- Nationalising the monopoly so that it can be run in the public interest

Answer 4 –
Economies of scale arise when long-run average costs decrease as output rises.
Plant economies of scale are economies of scale that arise specifically because of the large size of the production facility.
Plant economies of scale can arise from a number of sources:
- Specialization: the division of labour allows people to become experts at small parts of the production process, thus increasing the output per person. Similarly, more specialist machines can be employed as output rises.
- Indivisibilities: Some pieces of equipment and some processes such as research must be of a certain minimum size. Thus efficiency increases as the output approaches the optimum for this equipment and these processes.
- The container principle: The cost of producing storage containers might increase with surface area, while output increases with volume. So, as volume increases with size more rapidly than surface area, average costs will tend to decrease with higher output.
- The greater efficiency of large machines: Large machinery may be more efficient to use than small machinery in combination with other factor inputs, e.g. labour and raw materials. For example, one worker might be needed to operate a small or a large machine.
- By products: Large scale production may generate sufficient quantities of waste to produce by-products, e.g. heat, which can be sold commercially.
- Multi-stage production: Combining different stages of production within a single factory may reduce overall average production costs, e.g. due to reduced transportation costs.

Answer 5 –
i) The name of the market structure to which the above demand model applies

Oligopoly
ii) The assumptions are:
- if an oligopolist raises its price, its rivals will not follow suit – this leads to a relatively elastic demand curve at prices higher than the current price

• if an oligopolist cuts its price, its rivals will follow suit – this leads to a less elastic demand curve at prices lower than the current price

How the price stability is achieved in this market structure?
• The demand curve is relatively elastic above the equilibrium price (P1), since if the firm raises its prices, then other firms will not react and it will lose market share.
• The demand curve is less elastic below P1, since if the firm lowers its prices, then other firms will do likewise and it will gain few extra sales.
Thus the price stability results from:
• the reluctance to raise / lower prices (due to the kinked demand curve)
• the unchanged profit-maximising price and output level if costs change slightly
(ie MC moves within the discontinuous section of the MR curve)

Answer 6 –
i) Cost based pricing:
• It involves adding a fixed percentage mark up to average cost.
• Price = average fixed cost + average variable cost + mark-up
• The firm uses short run average cost curves as estimates are more reliable than long term average cost.
• Under this approach marginal cost curve and revenue curves are no longer used.
• The total AC curve is U shaped. Average variable cost curve(AVC) is saucer shaped. The mark up price is based on flat portion of average variable cost curve (AVC).

ii) Factors that affect mark – up used under cost based pricing:
• The firm's profit and sales target
• Price of competitor's
• The firm's level of market power
• Cost of raw materials
• Elasticity of demand of the product
• Economic condition of the market
• Elasticity of demand of the product
• Whether the market is expanding or contracting
• The likely action of rivals, their responses to changes in firm's price

Answer 7 –
i) Motor Third Party Insurance is a merit good because it satisfies the two main conditions of a merit good:
a. Its benefits are not fully appreciated by user as people believe that they will be safe, or they do not understand the risks
b. It confers external benefits i.e. it offers protection for other people who might be injured and whose cars might be damaged by the insured driver.

ii) Advertising and monopolistic competition:
• Advertising is used by monopolistic competition to create product differentiation. Hence, control some market share and charge higher price to customers.
• Advertising a product is intended to shift the product's demand curve to the right. Thus, it creates more awareness among the consumers about the product.
• The products' features are informed to consumers relative to competitors' products
• It makes the product's demand less price-elastic by creating brand loyalty in minds of consumers. This reduces number of substitute goods in minds of consumers.
• At price P1, the quantity demanded is Q1. After advertising, the demand curve shifts to the right and an increased quantity (Q2) to be sold at the original price. However, as the advertising has also increased brand loyalty and so reduced the elasticity of demand, the firm may be able to do better than this by increasing its price to P2 and still increasing sales.

Answer 8 –
i) In order to practise third-degree price discrimination:
• The firm must have some control over the price it sets, ie it must face a downward-sloping demand curve.
• It must not be possible for consumers to buy a good and then to resell it on to other consumers at a higher price.
• The elasticity of demand for the good must differ between different groups of consumers.
• It must be possible (and not prohibitively expensive) to identify the different groups of consumers and their different elasticities of demand.
• The characteristic chosen to differentiate between groups of consumers must be relatively easy to observe, acceptable to the consumers and legal.

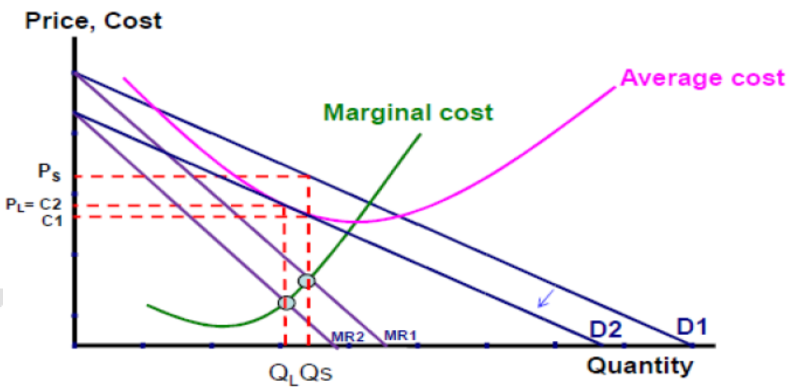
ii) Price discrimination is beneficial to the society.
Advantages:
• Government charges differential prices for senior citizens, children below certain age group and adult for bus and railways. This helps the senior citizens and children below certain age to enjoy lower fare.
• Government / Public Institutions charge differential entry fees for foreigners and residents. This would help to earn higher revenue for the institution.
• Different prices are charged for the same product in different locations. This may help to redistribute the wealth among rich and poor people.
• Some institutions offer different versions of the product like television with different prices. This would help people belonging to differential income groups to meet their needs.
• Price discrimination reduces dead weight loss and increases total welfare.
Disadvantages:
• Price discrimination can be used by supplier to increase market power of the firm in the market. It may be harmful to competition. e.g. various discounts offered to customers to increase sale of the product
• Price discrimination declines consumer surplus. It enables a transfer of money from consumers to firms.

• The firm can charge as much the consumer is willing to pay, this may increase profits of the firm as firm can charge higher price than previously set uniform price.

Answer 9 –

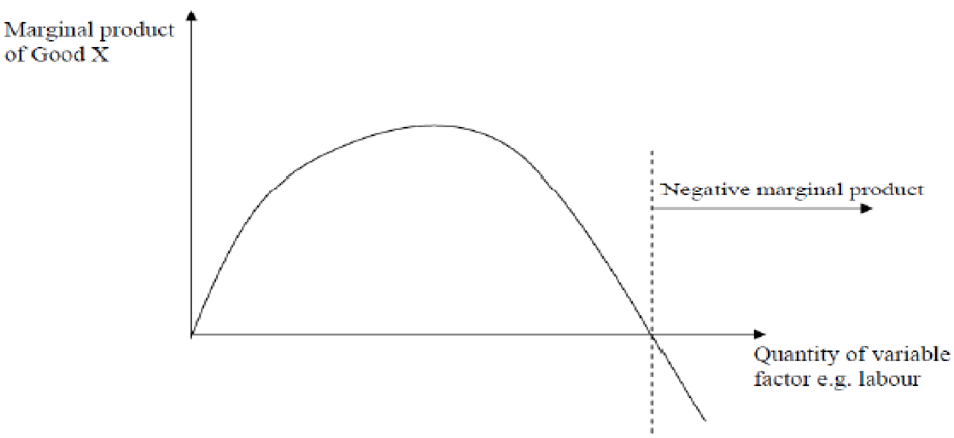
i. C
ii. B, C, D
iii. D
iv. A, B

Answer 10 –



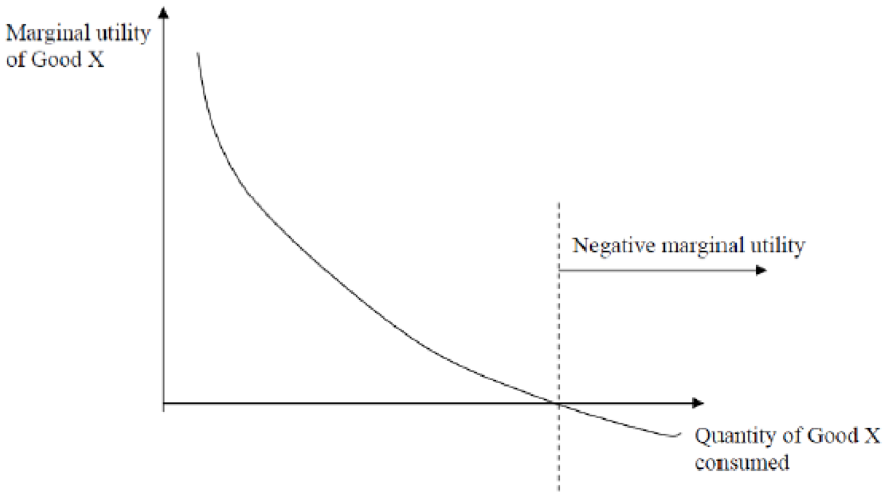
i. The law of diminishing returns applies to the short run production process. It states that as you add increasing amounts of a variable factor of production to a given amount of a fixed factor of production, after a certain point the marginal product of the variable factors will decline.
By contrast the law of diminishing marginal utility applies to consumption. It states that as a consumer consumes increasing amounts of a given product then the marginal utility derived from the product will decline.

ii.



(iii)

iii.


Marginal utility
of Good X
Negative marginal utility
Quantity of Good X
consumed