O. P. JINDAL SCHOOL, RAIGARH (CG) 496 001, INDIA

Phone: 07762-227042, 227293, (Extn. 227001 - 49801, 02, 04, 06, 09); Fax: 07762-262613; website: www.opjsrgh.in; e-mail: opjsraigarh@jspl.com

CLASS: XII- ECONOMICS
Types of Profit

The term profit has distinct meaning for different people, such as businessmen, accountants, policymakers, workers and economists.

Profit simply means a positive gain generated from business operations or investment after subtracting all expenses or costs.

In economic terms, profit is defined as a reward received by an entrepreneur by combining all the factors of production to serve the need of individuals in the economy faced with uncertainties.

Types of Profit:

On the basis of fields, profit can be classified into two types, which are explained as follows:

i) **Accounting Profit:**

Refers to the total earnings of an organization. It is a return that is calculated as a difference between revenue and costs, including both manufacturing and overhead expenses. The costs are generally explicit costs, which refer to cash payments made by the organization to outsiders for its goods and services. In other words, explicit costs can be defined as payments incurred by an organization in return for labor, material, plant, advertisements, and machinery**.**

Accounting Profit= TR-(W + R + I + M) = TR- Explicit Costs

ii) **Economic profit**

Takes into account both explicit costs and implicit costs or imputed costs. Implicit that is foregone which an entrepreneur can gain from the next best alternative use of resources. Thus, implicit costs are also known as opportunity cost. The examples of implicit costs are rents on own land, salary of proprietor, and interest on entrepreneur's own investment.

Economic profit = Total revenue-(Explicit costs + implicit costs

The Long-Run Equilibrium of the Firm under Perfect Competition

The long run is a period of time which is sufficiently long to allow the firms to make changes in all factors of production. In the long run, all factors are variable and none fixed. The firms, in the long run, can increase their output by changing their capital equipment; they may expand their old plants or replace the old lower-capacity plants by the new higher-capacity plants or add new plants.

Besides, in the long run, new firms can enter the industry to compete the existing firms. On the contrary, in the long run, the firms can contract their output level by reducing their capital equipment; they may allow a part of the existing capital equipment to wear out without replacement or sell out a part of the capital equipment.

Moreover, the firms can leave the industry in the long run. The long-run equilibrium then refers to the situation when free and full adjustment in the capital equipment as well as in the number of firms has been allowed to take place. It is therefore long-run average and marginal cost curve which are relevant for deciding about equilibrium output in the long run. Moreover, in the long run, it is the average total cost which is of determining importance, since all costs are variable and none fixed.
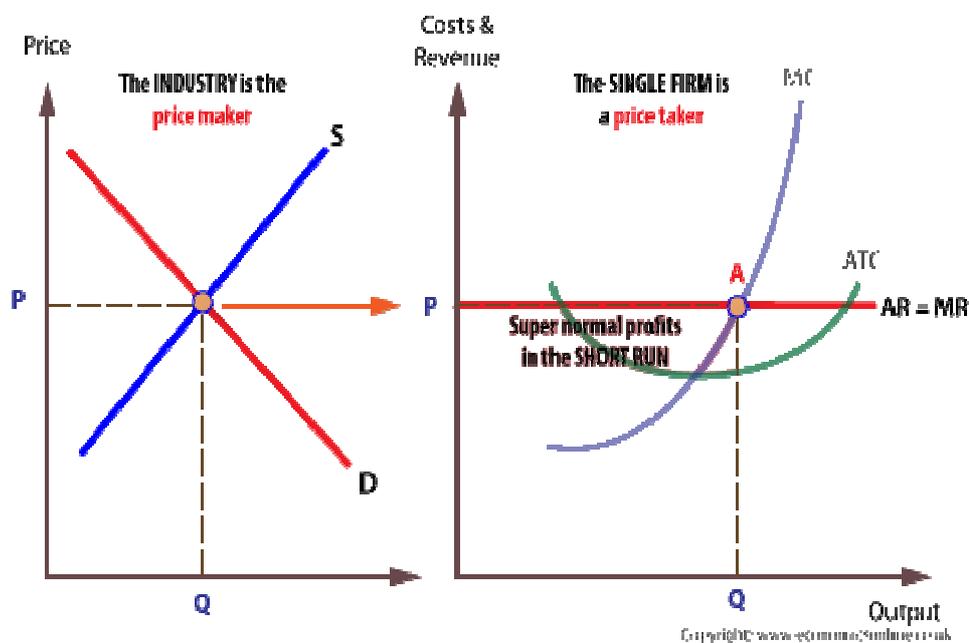
As explained above, a firm is in equilibrium under perfect competition when marginal cost is equal to price. But for the firm to be in long-run equilibrium, besides marginal cost being equal to price, the price must also be equal to average cost.

For, if the price is greater or less than the average cost, there will be tendency for the firms to enter or leave the industry. If the price is greater than the average cost, the firms will earn more than normal profits. These supernormal profits will attract outer firms into the industry.

With the entry of new firms in the industry, the price of the product will go down as a result of the increase in supply of output and also the cost will go up as a result of more intensive competition for factors of production. The firms will continue entering the industry until the price is equal to average cost so that all firms are earning only normal profits.

On the contrary, if the price is lower than the average cost, the firms would make losses. These losses will induce some of the firms to quit the industry. As a result, the output of the industry will fall which will raise the price
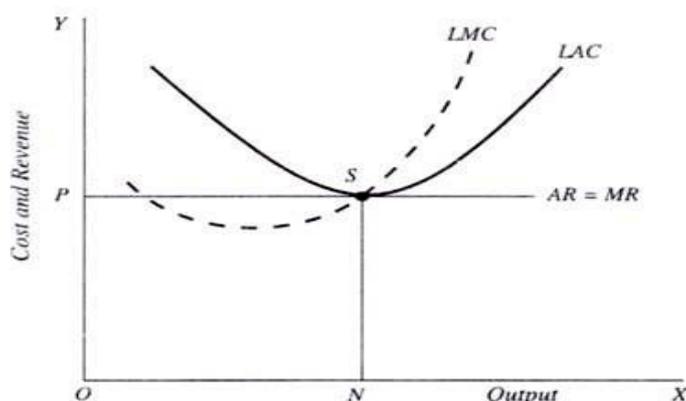

Fig. 23.6. *Long-Run-Equilibrium of the Firm*

On the other hand, with some firms going out of the industry, cost may go down as a result of fall in the demand for certain specialised factors of production. The firms will continue leaving the industry until the price is equal to average cost so that the firms remaining in the field are making only normal profits. It, therefore, follows that for a perfectly competitive firm to be in long-run equilibrium, the following two conditions must be fulfilled.

1. Price= Marginal Cost

2. Price = Average Cost

If price is equal to both marginal cost and average cost, then we have a double condition of long-run perfectly competitive equilibrium:

Price = Marginal Cost = Average Cost

But from the relationship between marginal cost and average cost we know that marginal cost is equal to average cost only at the minimum point of the average cost curve.

Therefore, the condition for long-run equilibrium of the firm can be written as:

Price = Marginal Cost = Minimum Average Cost.

The figure above represents long-run equilibrium of firm under perfect competition. The firm cannot be in the long-run equilibrium at a price greater than OP .This is because if price is greater than OP, then the price line (demand curve) would lie somewhere above the minimum point of the average cost curve so that marginal cost and price will be equal where the firm is earning abnormal profits.

Since there will be tendency for new firms to enter and compete away these abnormal profits, the firm cannot be in long-run equilibrium at any price higher than OP. Likewise, the firm cannot be in long-run equilibrium at a price lower than OP .under perfect competition.

If price is lower than OP, the average and marginal revenue curve will lie below the average cost curve so that the marginal cost and price will be equal at the point where the firm is making losses. Therefore, there will be tendency for some of the firms in the industry to go out with the result that price will rise and the firms left in the industry make normal profits.

We therefore conclude that the firm can be in long-run equilibrium under perfect competition only when price is at such a level that the horizontal demand curve (that is, AR curve) is tangent to the average cost curve so that price equals average cost and firm makes only normal profits.

It should be noted that a horizontal demand curve can be tangent to a U-shaped average cost curve only at the latter's minimum point. Since at the minimum point of the average cost curve the marginal cost and average cost are equal, price in long-run equilibrium is equal to both marginal cost and average cost. In other words, double condition of long-run equilibrium is fulfilled at the minimum point of the average cost curve.

The fact that the firm, working under conditions of perfect competition tends to be of optimum size in the long run is beneficial from the social point of view in two ways. Firstly, working at optimum size implies that the resources of the society are being utilised in the most efficient way. Secondly, it signifies that the consumers are getting the goods at the lowest possible price.

Practice Questions
Producer Behaviour and Supply
QUESTION SET–I Defend or refute the following statements. Write 'yes' or 'no' with reason:
 1. Production function is only a technical relationship between physical inputs and physical output
2. A producer strikes his equilibrium when the difference between TR and TC is maximised.
3. Supply may remain constant even when quantity supplied changes.
4. Contraction of supply causes a shift in supply curve.
5. Supply increases in response to increase in price of the concerned commodity.

QUESTION SET–II Defend or refute the following statements. Write 'yes' or 'no' with reason:
1. AP and MP tend to be U-shaped.
2. Stage of increasing returns (when MP is increasing) is economically redundant, because the producer will not strike his equilibrium in this stage.
3. The producer strikes his equilibrium only when MP is diminishing.
4. In the short period, production is done only by using the variable factors.
5. Law of variable proportions operates only if factor ratio happens to change.
QUESTION SET–III Write your comment on each of the following statements in a sentence or two:
1. MP must cut AP from its top.

2. If AP is falling, AP > MP.
3. If AP is rising, AP < MP.
4. If AP is falling, MP must also fall.
5. If AP is rising, MP must also rise.
6. TP must rise as more and more units of a variable factor are combined with the fixed factor.
7. MP is the rate of TP.
8. When MP is decreasing, TP increases at a constant rate.
9. When MP is increasing, TP increases at a decreasing rate.
10. Increasing returns to a factor occur because the variable factor is abundantly used in production.
11. Diminishing returns to a factor occurs because fixed factor cannot be used as much as the variablefactor
12. Diminishing returns to a variable factor occur because the producer fails to buy the variable factor in the required quantity
13. Supply never changes unless price changes.
14. It is more profitable for the producer to be in a stage of increasing returns than the stage of diminishing returns.
15. In a state of equilibrium, firm's MC should be rising
16. A producer supplies more of a commodity only at a higher price.
17. At a point of intersection of two supply curves, flatter curve shows higher elasticity of supply.

QUESTION SET–IV Complete the following sentences:
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1. In a state of equilibrium, the producer maximises _____
2. Break-even point occurs when _____
3. Shut-down point occurs when _____
4. MP is the rate of _____
5. MP = 0, when _____.
6. TP starts declining when _____
7. TP increases at increasing rate when _____.
8. TP increases at diminishing rate when _____
9. Increase in supply is caused by (*i*) _____, (*ii*) _____, and (*iii*)
_____ .
10. Decrease in supply is caused by (*i*) _____, (*ii*) _____, and (*iii*)
_____ .
11. Extension of supply is caused by _____
12. Contraction of supply is caused by _____
13. Upward movement along a supply curve occurs because of _____
14. Downward movement along a supply curve occurs because of _____
15. Two examples of technological progress causing a shift in supply curve are (*i*)
_____and (*ii*) _____.

HOTS (Higher Order Thinking Skills)
1.Draw a diagram showing that MR = MC when the difference between TR and TC is maximum.
2. Find TP when 10 units of the variable factor are combined with 05 units of the fixed factor and MP remains constant at 10 units_
3. At the existing level of output, MP = AP = 10 units. Would AP be equal to MP when production is increased and law of variable proportions is in operation?
4. Introduction of new technology increases MP. How would it affect supply curve of a firm?
5. How would you explain a situation when supply of a commodity increases without any increase in price of the commodity?

Cost and Revenue
QUESTION SET–I Defend or refute the following statements. Write 'yes' or 'no' with reason:
1. Fixed cost must be greater than variable cost when output is zero.
2. Average fixed cost curve is a rectangular hyperbola.
3. Average variable cost tends to fall, stabilise and rise as output increases.
4. Marginal cost includes both fixed cost and variable cost.
5. Average cost includes both fixed cost and variable cost.

6. Average revenue is the same as market price of the commodity.

7. Marginal revenue can never be negative.

8. When price is constant, AR > MR.

9. When price reduces as output increases, AR = MR.

10. Under perfect competition, AR and MR curves tends to slope downward.

11. Under monopoly, AR and MR curves are indicated by horizontal straight lines.

12. AR curve never shoots from the origin.

QUESTION SET–III Write your comment on each of the following statements in a sentence or two:

1. AC curve tends to be U-shaped.

2. MC is greater than AC when production is in a state of diminishing returns.

3. AC is greater than MC, so long as AC is falling.

4. MC and AC are equal when AC tends to stabilise.

5. Short period TC curve starts from Y-axis.

6. Long period TC curve starts from the origin.

7. Greater production always means greater revenue

8. AR is always greater than MR under monopoly.

9. When MC > ATC, ATC must rise.

10. Area under MC curve = TVC.

11. TR curve under perfect competition is a straight line, sloping upward from the origin.

12. Under monopoly, TR curve increases only at a diminishing rate.

QUESTION SET–IV

Complete the following sentences:

1. TFC = _____

2. TVC = _____

3. TC = _____

4. ATC is U-shaped, because of _____

5. AFC is a rectangular hyperbola, because _____

6. ATC and AVC never intersect each other, because _____

7. Area under MC curve = TVC, because _____

8. ATC is always above AVC, because _____

9. When MC > ATC, ATC must rise_____

10. Three examples of fixed costs are (*i*) _____, (*ii*) _____and

(*iii*) _____.

11. Three examples of variable costs are (*i*) _____, (*ii*_____ and   (*iii*)

_____ .

12. TFC curve is parallel to X-axis, because _____

13. Average and marginal cost tend to fall as output rises ,because_____

14. Average and marginal cost tend to fall as output rises, because _____

15. The concept of fixed cost is not relevant in the long period, because

_____

16. Under perfect competition, both AR and MR are indicated by the same horizontal straight line,because_____

_____

17. AR curve is above MR curve under monopoly because _____

18. MR is the rate of _____

19. When TR is increasing at a decreasing rate, MR should be _____

20. When TR is increasing at a constant rate, MR should be _____

HOTS (Higher Order Thinking Skills)

1. Draw TC and TR curves in one diagram. Show that MR = MC only when TR and TC are parallel to each other.

2. MC is always variable cost. Why?