



ECONOMICS

BOOKS - GOYAL BROTHERS PRAKASHAN ECONOMICS (HINGLISH)

PRODUCTION FUNCTION : RETURNS TO A FACTOR

Illustrations

1. Identify the three phases in the law of variable proportions from the following :

Units of Factor	Total Product (units)
1	20
2	50
3	70
4	80
5	60



[Watch Video Solution](#)

2. Identify the different output levels which mark the different phases of the operation of the law of variable proportions from the following data:

Units of Variable Input	Total Product (units)
0	0
1	50
2	20
3	28
4	20
5	30



[Watch Video Solution](#)

Exercises

1. Production function is an expression of :

A. Output

B. Inputs

C. Technology

D. Cost

Answer: C



[View Text Solution](#)

2. In 'returns of a factor', the world return refers to :

A. Units of output

B. Value of output

C. Total profit

D. Per unit profit

Answer: A



View Text Solution

3. If average product of employing one unit of variable input is 10 units and that of 2 units of variable inputs is 13 units, the marginal product of 2 units of variable inputs is :

A. 3 units

B. 11.5 units

C. 16 units

D. 23 units

Answer: C



Watch Video Solution

4. In the Law of Variable Proportions, when Total Product rises at decreasing rate, Average Product

- A. Rises throughout
- B. Falls throughout
- C. Initially rises and then falls
- D. Initially fall and then rises

Answer: C

 [View Text Solution](#)

5. So long as Average Product is rising :

A. Marginal product is also rising

B. Marginal product is greater than average product

C. Average product is greater than marginal product

D. Marginal product is less than average product

Answer: B



[View Text Solution](#)

Short Answer Questions I

1. Explain the term 'returns to a factor'.



[View Text Solution](#)

2. Give meanings of AP and MP.



[View Text Solution](#)

3. When one input is increased while other kept fixed TP increases at increasing rate in the beginning. Why ?



[View Text Solution](#)

4. When one input is increased while other kept fixed, after a level of output TP increases at decreasing rate. Why ?

 [View Text Solution](#)

5. When one input is increased while others are kept fixed, after a level of output TP falls. Why ?

 [View Text Solution](#)

Short Answer Questions li

1. Explain the concepts of TP, AP and MP.



[View Text Solution](#)

2. What does the law of variable proportions state ?

State the three phases of behaviour of output in this law.



[View Text Solution](#)

3. Explain the reasons behind the three phases of

the law of variable proportions.



[View Text Solution](#)

4. Represent the law of variable proportions diagrammatically and mark its different phases.

 [Watch Video Solution](#)

5. Explain the relation between MP and AP.

 [View Text Solution](#)

6. Explain the relation between MP curve and AP curve.

 [View Text Solution](#)



[View Text Solution](#)

7. Explain the relation between TP and MP.



[View Text Solution](#)

Long Answer Questions

1. Explain the relation between (a) TP and MP and (b) MP and AP.



[View Text Solution](#)

2. Explain the Law of Variable Proportions. Use diagram.



[Watch Video Solution](#)

Numerical Questions

1. 4 units of a factor of production produce 100 units of output, and 5 units produce 120 units of output, Calculate MP of that factor.



[Watch Video Solution](#)

2. Complete the following table :

Units of input	TP (units)	AP (units)	MP (units)
1	10		
2	22		
3	30		
4	30		
5	25		



[Watch Video Solution](#)

3. Identify the three phases of the Law of Variable Proportions from the data in question number 2.



[View Text Solution](#)

4. Complete the following table. Assume that the law of diminishing returns is operating throughout

Units of Variable Input	TP (units)
1	100
2	
3	
4	



[Watch Video Solution](#)

5. Complete the following table. Assume that the law of diminishing returns is operating throughout

Variable Input (units)	MP (units)
1	10
2	
3	
4	



[Watch Video Solution](#)

6. Prepare a schedule showing variable input and TP on the basis of the Law of Variable Proportions.



[Watch Video Solution](#)

7. Prepare a schedule showing variable input and MP on the basis of the Law of Variable Proportions.



[Watch Video Solution](#)

8. Complete the following table

Variable input (units)	TP (units)	AP (units)	MP (units)
0	0		
1			20
2			26
3	66		
4		19	
5			4



[View Text Solution](#)

Some Important Questions

1. Define marginal product.



[View Text Solution](#)

2. Define production function.



[View Text Solution](#)

3. What is meant by returns to a factor ? State the law of diminishing returns to a factor.



[View Text Solution](#)

4. What is meant by returns to a factor ? State the reasons for diminishing returns to a factor.



[View Text Solution](#)

5. What is meant by returns to a factor. What leads to increasing returns to a factor ? Explain.



[View Text Solution](#)

6. Identify different phases of the law of variable proportions from the following schedule. Give reason for your answer.

Variable Input (Units)	Total Product (Units)
1	4
2	9
3	13
4	15
5	12



[Watch Video Solution](#)

[Watch Video Solution](#)

7. Explain the Law of Variable Proportions with the help of total product and marginal product curves.



[Watch Video Solution](#)

8. Explain the Law of Variable Proportions and the reasons behind it. Use diagram.



[Watch Video Solution](#)

9. Giving reasons, state whether the following statements are true or false :

(i) When there are diminishing returns to a factor, total product always decreases.

(ii) Total product will increase only when marginal product increases.

 [View Text Solution](#)

10. Explain with the help of a total product curve the meaning of increasing returns to a factor.

 [Watch Video Solution](#)

11. Giving reasons, state whether the following statements are true or false :

(i) AP will increase only when MP increases.

(ii) Under diminishing returns to a factor, TP continue to increase till MP reaches zero.



[View Text Solution](#)