A Jesuit Christian Minority Institution



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# **Study Materials 07**

## Sub: Economics Class: XII Chapter 04:Theory of Production F.M: 45 Topic:Production function, Short run, long run, TP, AP, MP, Law of variable ProportionDate: 26/06/2020

### **Short Answer questions**

## 1x15 = 15

## Fill in the blanks:

- 1. The relation between input employed and output produced is known as\_\_\_\_\_\_function.
- 2. In production function concept, output is \_\_\_\_\_\_ variable.
- 3. Demand for factors of production is known as \_\_\_\_\_\_ demand.
- 4. Production function is of \_\_\_\_\_ types.
- 5. In short run production function only \_\_\_\_\_\_ input is variable.
- 6. In long run production function all inputs are \_\_\_\_\_
- 7. When total amount of output produced by employing all the inputs then it is known as \_\_\_\_\_\_.
- 8. Per unit of an input is known as \_\_\_\_\_.
- 9. Change in total product due to change in one extra unit of labour employment is known as \_\_\_\_\_.
- 10. For the first unit of labour employment, total product, average product and marginal product are \_\_\_\_\_.
- 11. When total product is maximum, marginal product is \_\_\_\_\_\_.
- 12. When total product decreases, marginal product goes to \_\_\_\_\_\_.
- 13. In law of variable proportion, the state of technology is \_\_\_\_\_\_.
- 14. The law of variable proportion will be applicable only when \_\_\_\_\_input is changed.
- 15. The law of variable proportion is based on the possibility of varying the \_\_\_\_\_between two inputs.

## Answers:

- **1.** Production.
- 2. Dependent,
- **3.** Derived.
- **4.** Two.
- **5.** One.
- **6.** Variable.
- **7.** Total product.
- 8. Average product,
- 9. Marginal product.
- **10.** Same.
- 11.Zero.
- **12.**Negative.
- **13.**Given.
- **14.**0ne.
- **15.**Ratio.

#### 2 marks questions

#### 1. Define production function.

**Ans:**The functional relationship between input employed and output produced is known as production function.

### 2. What do you mean by total product?

**Ans:**When total amount of output produced by employing all the inputs in the production process then it is known as total product.

### 3. What do you mean by average product?

Ans:Output per unit of an input is known as average product.

#### 4. Whatdo you mean by marginal product?

**Ans:**Change in total product due to change in one extra unit of labouremployment is known as marginal product.

5. What will be the value of marginal product when total product is maximum and decreasing?

**Ans:**.When total product is maximum and decreasing, the value of marginal product will be zero and negative respectively.

### 6. What are the types of production function?

**Ans:** Production function may be of two types. These are:

- **a.** Short run production function,
- **b.** Long run production function.

### 7. State the law of variable proportion.

**Ans:** The law can be stated as:With a given state of technology, if the quantity of one input is continuously increased, the quantity of the other input remaining the same, total output will first increase at an increasing rate but the rate of increase will eventually diminish.

# 8. State any two assumptions of law of variable proportion

Ans: 1. The state of technology is given.

**2.** This law will be applicable only when one input Is changed, other input remaining the same.

#### 9. What do you mean by short run production function?

**Ans:** In short run production function only one input say, labour is variable but capital input is constant.

#### $10.\ {\rm State}$ the relation between average product and marginal product.

Ans: 1. When AP increases then MP is greater than AP.

2. When AP is maximum then MP is equal to AP.

**3.** When AP decreases then MP is less than AP.

### 5 marks questions

**1.** State the law of variable proportion. What are the assumptions of law of variable proportion. Explain graphically.

**Ans:** The law can be stated as:With a given state of technology, if the quantity of one input is continuously increased, the quantity of the other input remaining the same, total output will first increase at an increasing rate but the rate of increase will eventually diminish.

#### **Assumptions:**

- 1. The state of technology is given.
- 2. This law will be applicable only when one input Is changed, other input remaining the same.
- 3. This law is based on the possibility of varying the ratio between two inputs.
- 4. This law has been derived not from any theoretical analysis but from practical experience.
- 5. This law refers to diminishing average product and marginal product.
- 6. Average product and the marginal product of the variable input will eventually diminish.

Graphical explanation.

2. What do you mean by total product, average product, marginal product. Explain the relationship among them graphically.

**Ans:**When total amount of output produced by employing all the inputs in the production process then it is known as total product.

Output per unit of an input is known as average product.

Change in total product due to change in one extra unit of labour employment is known as marginal product.

When total product is increasing, maximum and decreasing, then the value of marginal product will be positive, zero and negative respectively.

Again When AP increases then MP is greater than AP and when AP is maximum then MP is equal to AP. Lastly, when AP decreases then MP is less than AP. Graphical explanation.

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