Production
28 August 2023 21:00

Theory of Production

Production:

In common parlance, → Activity of making something Material
↓
Tangible goods

In Economics 1. Production is any economic activity which converts inputs into outputs which are capable of satisfying human want

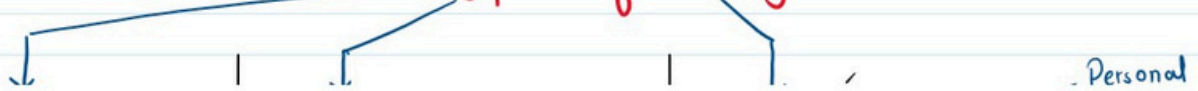
Imp: → Whether it is making of material goods or providing a Services, it is included in production, provided it satisfies the want of some people.
Ex- Teachers, CA services, etc.

James Bates & J.R. Parkinson: "Production is the organised activity of transforming resources into finished product in the form of goods & Services, and the objective of production is to satisfy the demand of such transformed resource".

→ PRODUCTION does not mean Creation of matter.
↓
According to the fundamental law of science - Man cannot create Matter.
↓
Humans can add only utility to things which already exist in nature.

→ "Production can also be defined as Creation or addition of utility."

→ There are various types of utility:

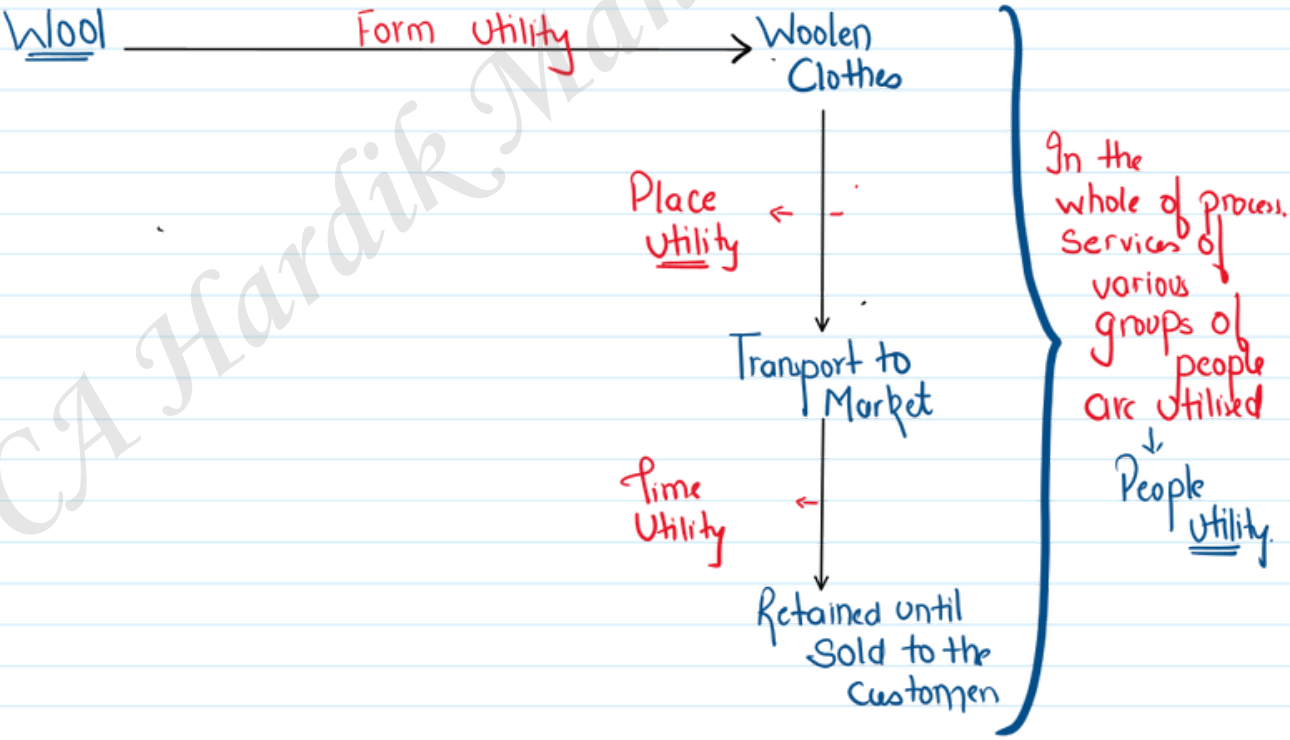


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Form Utility	Place utility	Time Utility	People utility
Changing the form of natural resources. Ex- Changing the form of a log of wood into a table.	Changing the place of the resources from a place where they are little or no use, to another place where they are of greater use. Ex- Extraction from earth like coal, etc.	→ Making available materials at times when they are not normally available. Ex- Canning of seasonal fruits is undertaken to make them available during off-season.	Personal Making use of personal skills in the form of Services. Ex- Transport Workers

→ Production is nothing but Creation of Utilities in the form of goods or Services.

Ex- Woolen Clothes



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Multiple Choice Questions

1) **Which of the following is considered production in Economics?**
   a) Tilling of soil
   b) Singing a song before friends
   c) Preventing a child from falling into a manhole on the road
   d) Painting a picture for pleasure

2) **Which of the following statements is true?**
   a) The services of a doctor are considered production
   b) Man can create matter
   c) The services of a housewife are considered production
   d) When a man creates a table, he creates matter

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Multiple Choice Questions

3) **Production may be defined as an act of_____**
a) Creating or addition of utility
b) Earning profit
c) Destroying utility
d) Making material things from raw material

4) **Which of the following is considered production in Economics?**
a) Filling ITR for friends and family
b) Singing songs for friends
c) Teaching Economics to friends
d) Teaching Economics to CA students in a class

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Multiple Choice Questions

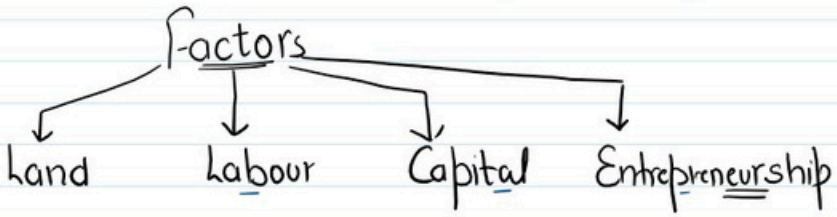
5) **Which utility is added when plastic is converted into plastic bottle?**
   a) Time Utility
   b) Form utility
   c) Place utility
   d) None of the above

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Factors

29 August 2023 18:18

- Factors of Production:
  - ↳ Inputs
    - ↳ Goods/services which are required in production process.



1) Land
   - ↳ Soil or earth's surface alone but refers to all the gifts of nature like water, light, air, etc.
     - Does not mean

Theoretically, foll. characteristics are given which would qualify an input/factor to be called Land:

a) Free gift of Nature:
   - ↳ No human effort is required for making land available for production.
     - → No Supply price since no payment has been made to mother nature for obtaining land.

b) Supply of Land is fixed:
   - (i) Strictly limited in quantity
   - (ii) No change in demand can effect amt. of land in existence.
   - ★ (iii) Economy point of view: Supply of Land is perfectly inelastic.
   - (iv) Firm's point of view - Relatively elastic

c) Land is permanent & has indestructible power:
   - ↳ According to Ricardo land has certain indestructible powers & those properties of land cannot be destroyed.

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destroyed.

c] Land is a passive factor:
↳ Unless human effort is exercised on land, it does not produce anything on its own.

e] Land is immobile:
↳ Land cannot be shifted physically from one place to another.

f] Land has multiple uses:
↳ Can be used for various purposes.

g] Land is heterogeneous:
↳ No two pieces of land are alike. They differ in fertility & other characteristics.

2] Labour
↳ Human efforts

a] Any mental or physical efforts directed to produce goods & services.

b) Various types of human efforts which require the use of physical efforts, skills, & intellect.

c) Anything done out of love & affection is not labour in economic sense.
→ Services of housewife/household are not treated as labour.
→ While those of a maid servant are treated as labour.

* Characteristics

1] Human efforts: Labour is connected with human efforts.
- Certain psychological considerations like fair treatment, favourable work environment, etc are essential for labourers, which is not the case with other factors.

2] Labour is perishable.

Gajaraj Mancharanda

Other factors.

2) Labour is perishable:
↓
which can't be stored.
→ Labourer cannot store his/her labour.
→ Day's labour lost cannot be completely recovered by extra work on any other day.

3) Labour is an active factor - Without active participation of labour, Land & Cap. may not produce anything.

4) Labour is inseparable from Labourer - A Labourer is the source of his/her own Labour.

5) Labour power differ from labourer to labourer - Labour is heterogenous.
Labour power depends of:
Labourer inherent & acquired qualities
work environment & incentive to work.

6) All labour may not be productive - i.e all efforts are not sure to produce goods/services.

7) Labourer has poor bargaining power - → Since labour cannot be stored the labourer is compelled to work at the wages offered by employers.

8) Labour is mobile: Workers can move from one job to another or from one place to another.

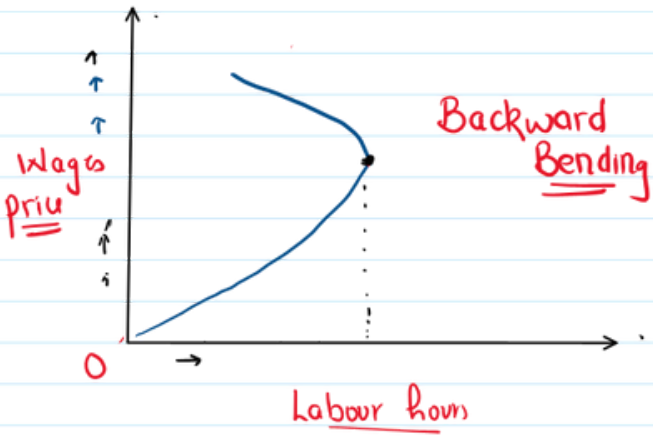
9) There is no rapid adj. of supply of labour to the demand for it - The total supply of Labour cannot be increased or decreased instantly.

10) Choice b/w hours ...

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± 10] Choice b/w hours of labour & hours of leisure:

This feature gives rise to a Backward Bending shape to the supply curve of labour.



1] Supply of labour & wage rate is directly related.
↓
It implies as wage rate increases, labourer increases supply of labour.

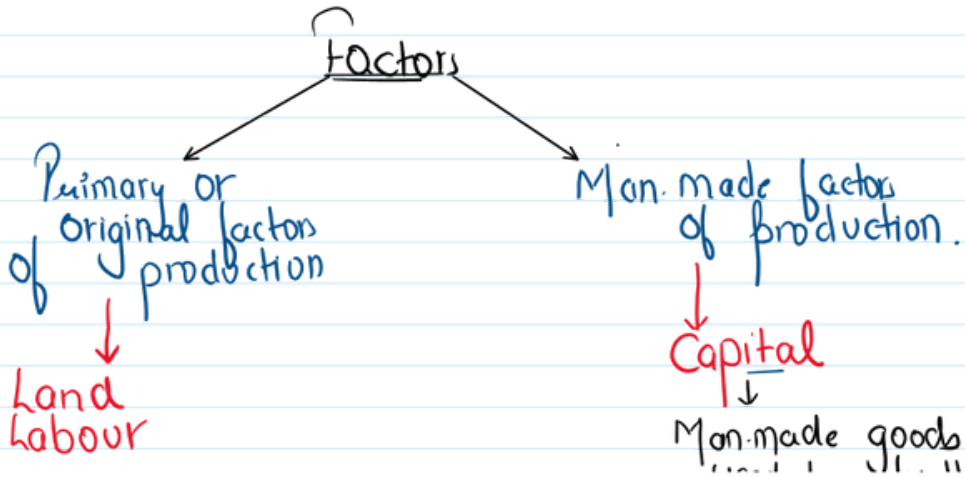
2) However, beyond desired level of income, labourer prefers to have more of rest & leisure than earning money.

3] Capital

Wealth
↓
Total value of Assets an individual possesses at a given point of time.
↓
Stock concept

Capital - part of wealth
↓
Assets used for production.

→ Used for production of wealth.
↓
Stock concept which generates a periodical income which is a flow concept



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- Land
- Labour

↓
Man-made goods used for further production of wealth.
Ex- Machines etc.

→ Types of Capital :-

1. Fixed cap - a) Exists in durable shape
b) Renders services over a period of time.
Ex- Machines.

2. Circulating cap - a) Single use, not available over a period of time
b) Ex- Raw Material, fuel, etc.

3. Real capital - a) Physical Assets
- Fixed cap + Circulating cap.

4. Human cap - a) Human skills & ability
b) Good deal of investment goes into creation of these abilities in humans

5. Tangible cap - a) Physical existence, can be perceived by senses.
Ex- Machines

6. Intangible cap - No physical existence
Ex- Goodwill, etc.

7. Individual cap - personal property owned by an individual.

8. Social cap - What belongs to the society as a whole
Ex- Roads, etc.

x——x

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Factors

01 September 2023 21:09

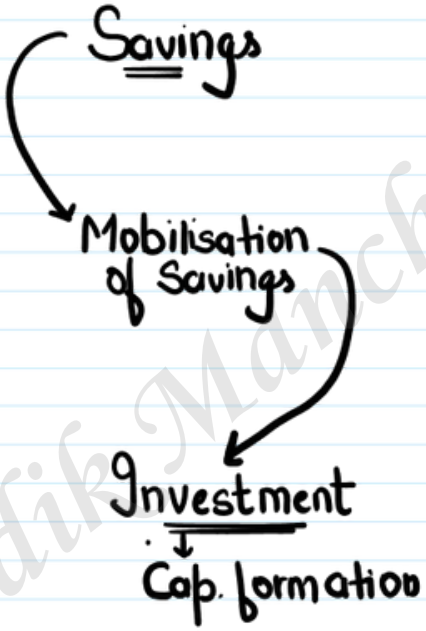
Capital formation → Inc in the stock of Real cap in a country

↓

Investment

→ Prod. of more cap. goods like Machines which are used for further prod. of goods.

Stages of cap. formation:



1. Savings

Foundation of cap. depends on

↓

Ability to Save

↓

Income of an individual → ↑ Income ↑ Savings

↓

Inc. in Income

True not only for individual but for economy as a whole as well.

- Prospensity to consume ↓
- Propensity to Save ↑

↳ Rich countries has greater ability to Save as compared to poor countries

* Not only the ability to save, willingness is also important

↓

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* Not only the ability to save, willingness is also important
↓
- Concern about future
- The social setup in which he/she lives.

* Government Role → Allowing tax deduction on income saved.
↓
Enforce compulsory savings on employed people by making Insurance & PF compulory.

2] Mobilisation of Savings:
↳ Saved money should enter into circulation & facilitate the proces of cap formation
↓
Precondition of Mobilisation of Savings [- Wide spread network of Banking
- Availability of financial product

- Govt. Role
↓
Generating Savings through various incentives
Channelising the Savings towards the priority needs of the community
↓
Leads to Socially beneficial types of cap. formation.

3] Investment ↑
↳ Real Savings gets converted into real capital Assets.
→ Economy should have entrepreneurial Class which is ready to take risk, & invest these Savings

Important Boinb

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△ Invest These Savings

Important points

1) In order to accumulate cap goods, some current consumption has to be sacrificed.

2) If society consumes all & saves nothing, future productive cap. will fall.

3) Higher rate of cap formation will enhance
- productive capacity
- accelarate economic growth
& opportunities for employment.

4) Entrepreneur :

↳ Mobilises the factors - Land, Labour & cap
→ Combined factors in the Right proportion.
→ Initiate the process of production.
→ Bears the Risk.

→ He/she has also been called the organiser, the Manager or Risk taker.

But, in these days of specialisation, separation of ownership & Management, task performed by manager have become diff. from Entrepreneur.

Manager
↓
Decision making of routine & non-routine types.

Entrepreneur
↓
Initiate production work & bear the risk.

Functions of Entrepreneur

- Initiate business Enterprise & resource Co-ordination
- Risk bearing or uncertainity
- Innovation

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1) Initiate business enterprise & resource co-ordination.

[First & foremost function] ✓

- Senses business opportunities
  ↓
  Conceives project ideas
  ↓
  Decide on scale of operation

→ Obtaining factors of production
  Land, Labour, Capital
  - Co-ordination
  - Payment

→ Surplus after paying all factors of production, belong to Entrepreneur, as reward for efforts & risk-taking.

2) Risk Bearing or uncertainity

→ Ultimate Responsibility for Success & Survival lies with Entrepreneur.

[Most Important function]

a) What is planned & anticipated may not come true. (Financial Risk)
   - Demand, cost structure, fashion & taste of the people & govt. policies regarding tax may change

b) Technology Risk
   Inventions & improvements in techniques of production → Making existing techiques obsolete.

* Frank Knight – Profit is the reward for bearing Uncertainity

Foreseeable Risk –
↓
These can be insured.
Ex- fire, theft etc.

Uncertainities
↓
These cannot be insured.
Ex- Change in taste, emergence of competition etc.

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— D D — — competition etc. J

→ While nearly all functions of entrepreneur can be delegated, risk bearing cannot be delegated to anyone.

3. Innovation

[TRUE FUNCTION]

According to Schumpeter, the true function is to Introduce Innovation.

→ Innovation may bring in
- Greater efficiency
- Competitiveness
- Greater profits

→ Innovations may yield profits for a short time
↓
Successful innovations will be imitated by others & when it is widely adopted, profits tend to disappear.

→ Entrepreneurs promote economic growth of the country by introducing new innovations & contributing to technological progress.

x ——x

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Production Function

07 September 2023 21:06

- PRODUCTION FUNCTION

↳ Relationship b/w dependent & independent variable

Prod. functions - Relationship b/w Input & output (Dependent)

Input → Factors of prod. → firm scarce resources

$Q = f[\text{factors of production}]$

Ex- $[Q = 5L + 2C]$

Assumptions:

1. Relationship b/w input & output exists for a specific period of time.
   → Q is not a measure of accumulated output over time.

2. There is a given "State of the Art" in prod. technology
   ↓ No change in technology (caus)
   → Any innovation would change in the relationship b/w given input & output

3. No waste or inefficiency
   ↳ whatever input combination are included in a prod. function, the output resulting is at max level.

Samuelson

Prod. function - With given state of technology, max amt of output that can be produced with given input.

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max amt of output that can be produced with given input.

→ Also, Min. quantities of inputs that are req. to produced given output qty. of.

* For the purpose of analysis, inputs are reduced to two (Labour, Cap)

$$Q = f(L, K)$$

---

* Short Run & Long Run Prod. function

→ Distinction is not related to any particular measurement of time.

Short Run - Amt of atleast one of the inputs used remain unchanged during that period.
Variable factor - changes with the output (↳ Labour)

Short Run prod. function – Goods or Services that can be produced by a set of inputs, assuming at least one of the inputs remains fixed.

- Generally, Capital is a fixed factor in the short run.

↳ **Law of variable proportion.**

Long-Run ↳ All factors of prod. are variable.
→ Planning Horizon

Long Run prod. function – Max. qty of goods or services that can be produced by set of inputs assuming that firm is free to vary all inputs of the amt.

→ Law of Return to Scale

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all inputs. ∪ ∪ ∪ the ∪ amt.

→ Law of Return to Scale

* Law of variable proportion
  or
  Law of Returns to a variable input
  or
  Law of Diminishing Returns

output — Labour

Meaning of certain terms

output

1. Total Product [TP]
   ↳ Total output resulting from the effort of all the fact. of production combined together at any time.

2. Marginal Prod. [MP]
   Additional
   ↳ Addition to the TP by an additional unit of input.

$$= \frac{\Delta TP}{\Delta \text{variable factor}}$$

Labour	TP	MP
1	100	—
2	140	40
3	190	50

3. Average Product [AP]
   ↳ TP per unit of variable factor

Labour	TP	MP	AP
1	100	—	100
2	140	40	70
3	190	50	63

$$\Rightarrow AP = \frac{TP}{\text{No. of variable factors}} = \frac{140}{2} = 70$$

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No. of variable factors

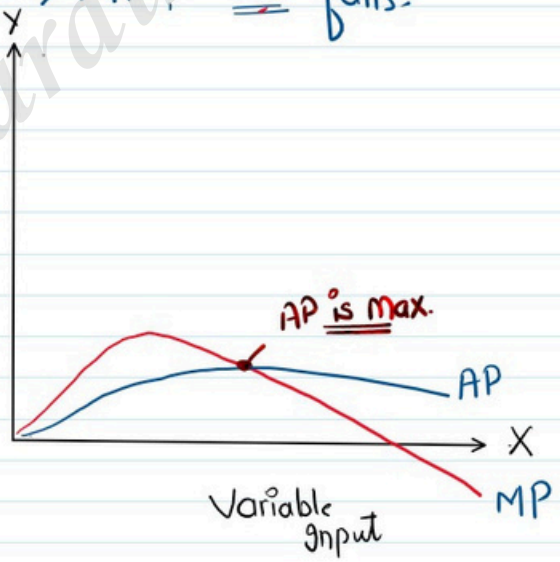
- Variable

Quantity of labour	Total Product (TP)	Average Product (AP)	Marginal Product (MP)
(1)	(2)	(3)	(4)
1	100	100.0	100
2	210	105.0 ↑	< 110 ↑
3	330	110.0 ↑	< 120 ↑
4	440	110.0 ↑	= 110 ↓
5	520	104.0	> 80
6	600	100.0	> 80
7	670	95.7	> 70
8	720	90.0	> 50
9	750	83.3	> 30
10	750	75.0	0
11	740	67.3	−10

+110

* Relationship b/w AP & MP

1. When MP > AP, AP rises as a result of inc. in qty of variable input.
2. When MP = AP, AP is maximum. → MP curve cuts the AP curve at its max.
3. When AP > MP, AP falls.



X — X

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Law of DR

08 September 2023 21:07

- Law of Variable Proportions:

↳ Describes the relationship b/w Input & output in the short Run. ✓

Assumption:

1] No change in Technology
↳ If there is any improvement in technology, MP & AP may rise.

2] Some inputs must be kept fixed.

Imp 3] Law does not apply to those cases where factors must be used in fixed proportion to produce output. ✓

Ex- Halwa
↳ 1kg Suji + 500g Sugar + 500ml water → 1kg Halwa (Output)
2kg Suj + 1kg + 1 l water → 2kg Halwa

Ex- 1 Mach + 2 Labour + 1 Mach + 2 Labour

4) We consider only physical input & output and not economic profitability in monetary terms.

→

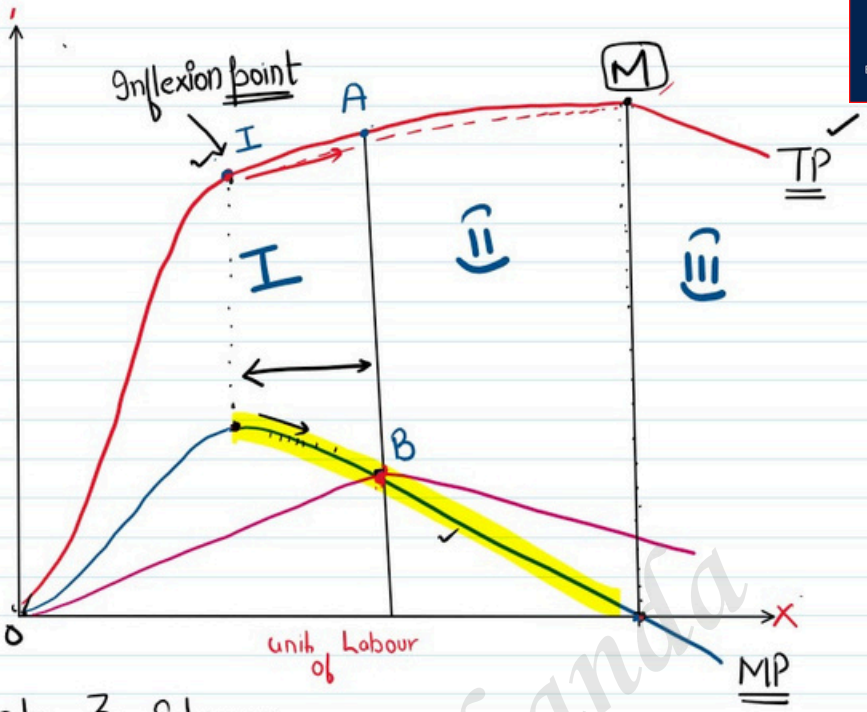
Quantity of labour	Total Product (TP)	Average Product (AP)	Marginal Product (MP) (↗ change in TP)
(1)	(2)	(3)	(4)
1	100 (Inc. rate)	100.0	100
2	210 +110	105.0	110
3	330 +120	110.0	120
4	440 +110	110.0	+110
5	520 +80	104.0	+ 80
6	600 +80	100.0	+ 80
7	670 + 70	95.7	+ 70
8	720 +50	90.0	+ 50
9	750 +30	83.3	+ 30
10	750 0	75.0	0
11	Decrease 740	67.3	−10

I: Inc at Diminishing Rate; II: Dimin Rate

Y ↑

Inflexion point A

M



Law is divided into 3 Stage:

1] Stage of Increasing Returns

upto Inflexion
- → TP is inc. at inc. rate
- → MP also rises & is max at inflexion point
- → AP also goes on rising.

from Inflexion point till point A.
- → TP is increasing at a dim. rate
- → MP falls but is positive
- → AP keeps on rising & reaches it max. point
  - └ AP = MP

→ The Stage 1 ends where AP reaches its max point.

Explanation:

1] Qty of fixed factor is abundant, relative to the qty of variable factor.

2] Efficiency of fixed factor increases as add. units of variable factor are added to them.

3] Why fixed factor is not taken in a qty which suits available variable factor?
↓
Fixed factor is indivisible

4) As more unit of variable factors are employed, efficiency of variable factor increases
↳ Specialisation becomes possible.

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variable factor increases
↳ Specialisation becomes possible.

Stage 2: Stage of Diminishing Returns:

1] TP is inc. at diminishing return
- Reaches its max point
↳ when MP=0

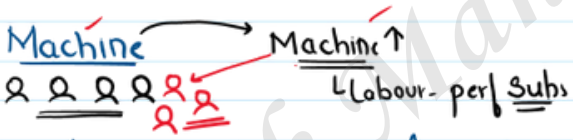
2] Both MP & AP are falling, but positive

3) MP is zero & at this point, second stage ends.

Explanation:

1) Fixed factor becomes inadequate relative to the qty of variable factor.

2] Imperfect Substitutability of one factor for another.



→ AP & MP decreases because fixed factor is worked too hard & labour is not a perfect sub. for a fixed factor.

Stage 3: Stage of Negative Return:

1. TP declines
2. MP is negative & AP is falling

Explanation.

1. Qty of variable factor becomes too excessive relative to the fixed factor so that they get in each other ways, with the result that TP falls.
2. In such a situation, reduction in the unit of variable factor will increase the total output

STAGE OF OPERATION:

↳ In which Stage a rational producer will seek to produce?

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∴ In which stage a rational producer will seek to produce?

'Economic absurdity' or 'Economic non-sense'
- Not in Stage 3 - MP is negative
- Not in Stage 1 - Fixed factor won't be fully utilised

→ STAGE 2 ✓

At which point in Stage 2 ?

↳ depends upon the price of factor.

→ Principle of 'Marginalism'

Marginal Revenue = Marginal cost



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Return to scale

12 September 2023 21:14

Returns to Scale

↳ Long Run

All factors of production are increased or decreased together in the same proportion.

Q = 2L + 1 Mach.
100·1↑ 4L + 2 Mach.

Example:	Machines	Labour	output
100·1.↑	2.	10	100
	2+2=4	10+10=20	?

Constant Return to Scale

Inputs ↑ 100·1.
output ↑ 100·1.

→ output change in the same proportion.

↓

Linear Homogeneous prod. function

$Q = f(L, K)$

$= f(2L, 2K)$

$= 2 \times f(L, K)$

$2Q = 2 \times f(L, K)$

↓

Let, constant no. = h

$hQ_x = h \times f(L, K)$

Increasing Return to Scale

Input ↑ 100·1.
output > 100·1.

→ output increase in greater proportion.

* Specialisation & division of labour
* Economies of Scale

Decreasing Return to Scale

Input ↑ 100·1.
output < 100·1.

→ output increases in a smaller proportion

* Difficultly in Management
* Lack of co-ordination.

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* Cobb Douglas production function:

USA → Paul H. Douglas
→ C.W. cobb

→ Applies not to an individual firm but to the whole of Manufacturing industry.

Originally, $Q = K \cdot L^{a} \cdot C^{1-a}$

Q = Output
K = Positive constant no. → factor productivity
L = Labour
C = Capital

$= 1$

a = Labour elasticity.
↳ how much output changes in response to change in labour

1-a = Capital elasticity.

L	C
a	1-a
0.7	0.3

Input ↑ 50%

Change in output = 35%

Change in output = 15%

Total change in output = 50%

→ Cobb & Douglas assumed that returns to scale are constant.

Conclusion: Labour contributed 3/4 & Capital about 1/4 of increase in manufacturing production.

Now, $Q = K \cdot L^{a} C^{b}$

a + b = Total input elasticity → Ex- Input elasticity = 15
Input ↑ 100%
output ↑ 150%

If, $a+b > 1$ - Increasing Ret. to scale
$a+b = 1$ - Constant Ret to Scale
$a+b < 1$ - Dec. ret to Scale.

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$a+b = 1$, Constant Ret to Scale

$a+b < 1$, Dec. ret to Scale.

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MCQs_12th Sep

12 September 202322:17



MCQs_12th Sep

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Multiple Choice Questions

6) **In describing a given production technology, the short run is best described as lasting**
   a) Up to six months from now
   b) Up to five years from now
   c) As long as all inputs are fixed
   d) As long as at least one input is fixed

7) **The " law of diminishing return" applies to:**
   a) The short run, but not the long run
   b) The long run, but not the short run
   c) Both the short run and the long run
   d) Neither the short run nor the long run

Multiple Choice Questions

8) **Diminishing returns occur:**
   a) When units of a variable input are added to a fixed input and total product falls
   b) When units of a variable input are added to a fixed input and marginal product falls
   c) When the size of the plant is increased in the long run
   d) When the quantity of the fixed input is increased and returns to the variable input falls

Ashutosh Manchanda

Multiple Choice Questions

9) **Which of the following is true?**
   a) Accumulation of capital depends solely on income of individuals
   b) Savings can be influenced by government policies
   c) The supply curve of labour is an upward slopping curve
   d) None of the above

10) **Most important function of entrepreneur is to _____**
   a) Innovate
   b) Initiate the business enterprise
   c) Finance
   d) Earn profit

Multiple Choice Questions

11) **Utility is created by making goods and services available at times when they are not normally available:**
   a) Form Utility
   b) Place Utility
   c) Time Utility
   d) Personal Utility

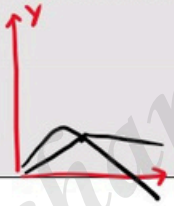
12) **As a Factor of Production, the Elasticity of Supply of Land from the viewpoint of the entire economy is:**
   a) Infinite
   b) Zero
   c) Positive
   d) Negative

Prashant Manchanda

Multiple Choice Questions

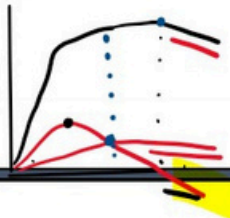
13) **At the Point of Inflexion:**
a) Total product is maximum
b) Average product is maximum
c) Marginal product is maximum
d) All of the above

14) **When Average Product (AP) rises as a result of an increase in the quantity of variable input:**
a) MP <AP
b) MP = AP
c) MP > AP
d) There is no relationship between MP and AP



Multiple Choice Questions

15) **The Marginal, Average, and Total Product Curves encountered by the Firm producing in the short run exhibit all of the following relationships except**
a) When Total Product is rising, Average and Marginal Product may be either rising or falling
b) When Marginal Product is negative, Total Product and Average Product are falling
c) When Average Product is at a maximum, Marginal Product equals Average Product, and Total Product is rising
d) When Marginal Product is at a maximum, Average Product equals Marginal Product, and Total Product is falling



Ajatasatru Manchanda

Multiple Choice Questions

16) **Which of the following is not an assumption in the Law of Variable Proportions?**

a) There are no perfect substitutes for the Fixed Factor - by default
b) Factors of Production can be used in any proportion →
c) Only physical quantities of inputs and outputs are considered
d) None of the above

Multiple Choice Questions

- Short Run

17) **In the production of wheat, all of the following are variable factors that are used by the farmer except –**

a) The seed and fertilizer used when the crop is planted - variable
b) The field that has been cleared of trees and in which the crop is planted - fixed
c) The tractor used by the farmer in planting and cultivating not only wheat but also corn and barley
d) The number of hours that the farmer spends in cultivating the wheat fields

Ratik Manchanda

Multiple Choice Questions

18) **The stage of Increasing Returns applies from ..... to .....**
a) Origin to Point where AP is maximum
b) Point where AP is maximum to Point when TP is maximum
c) Point when TP declines and MP becomes negative
d) All the above

19) **In case of law of variable proportions, diminishing returns occur**
a) When units of a variable input are added to a fixed input and total product falls
b) When units of a variable input are added to a fixed input and marginal product falls
c) When the size of the plant is increased in the long run.
d) When the quantity of the fixed input is increased and returns to the variable input falls.

Multiple Choice Questions

20) **In which stage of production are the Average Product and Marginal Product decreasing with the Marginal Product above zero (positive)?**
a) In the stage of Increasing Returns
b) In the stage of Diminishing Returns
c) In the stage of negative returns
d) None of the above

21) **Stages I and III are called**
a) Economic Absurdity
b) Economic Stability
c) Economic Equilibrium
d) All of the above

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Multiple Choice Questions

22) If as a result of 50% increase in all inputs, the output rises by 75%, this is a case of:

a) Increasing Returns to a Factor
b) Increasing Returns to Scale
c) Constant Returns to Scale
d) Increasing Returns to Factor

23) Linear Homogeneous Production function is based on

a) Increasing Returns to Scale
b) Decreasing Returns to Scale
c) Constant Returns to Scale
d) None

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Production Optimisation

13 September 2023 20:25

PRODUCTION OPTIMISATION

↳ Production Equilibrium

Goal of producer - Minimise cost

↓

What combination of factors to use for given output.

Isoquant | Iso cost

Isoquant → All those combination of inputs (Factors [Labor/capital]) which are capable of producing same level of output

Equal Quantity

↓

very very similar to IC curve

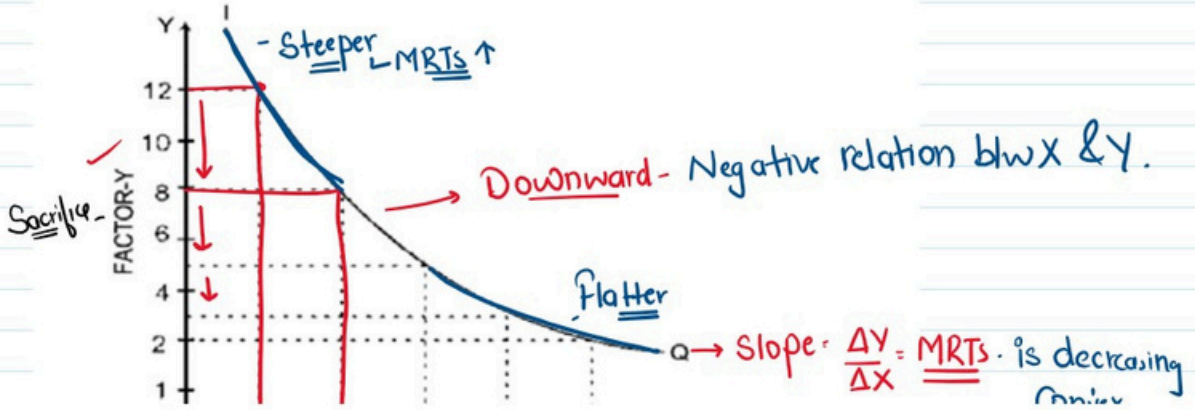
↓

Producer is indifferent as to which combination to choose.

Iso quant = Equal product curve = Production indifference curve = Iso product curve.

Factor combination	Factor X (Capital)	Factor Y (Labour)	MRTS (Marginal Rate of Technical Sub)
A	1 Mach.	12	
	+1	-4	
B	2 Mach.	08	4 ↓
	+1	-3	
C	3	05	3 ↓
	+1	-2	
D	4	03	2 ↓
	+1	-1	
E	5	02	1 ↓

$\frac{\Delta \text{Factor Y}}{\Delta \text{Factor X}}$



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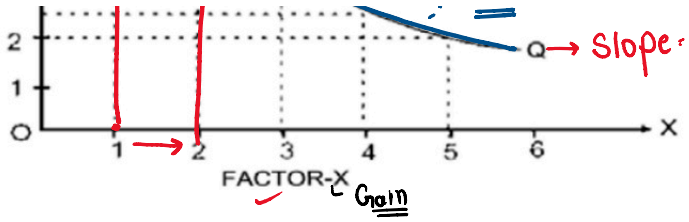
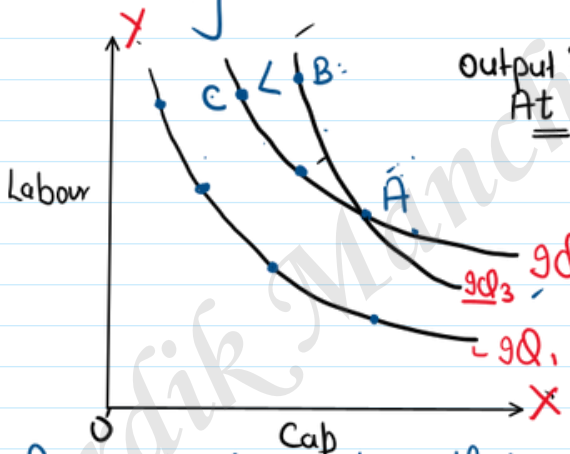


Fig. 2 : Equal Product Curve or Isoquant

- Properties of Isoquant curve:-

1) Negatively slope - Downward sloping curve
2) Convex to the origin ↳ MRTS is decreasing.
3) Non-Intersecting -



Output level at B > output level at C
At A, output level is same.
↳ which is not possible.

IQ2 - Higher IQ
More output

4) Higher IQ - higher level of output

Diff. blw IC & IQ → In IC it is not possible to quantify the level of satisfaction. but the level of production is easily quantified.

→ Iso-Cost or Equal Cost lines:- Budget line

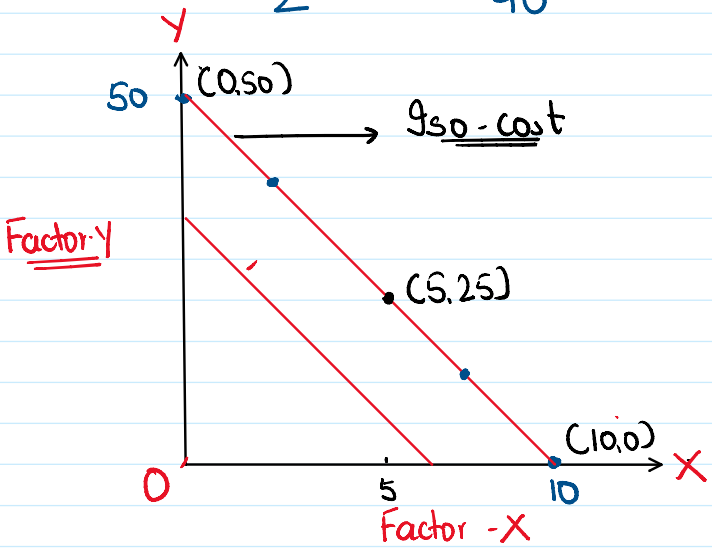
↳ various combination of 2 factors which producer can buy with the given budget.

Ex- ₹1000.

	X ₹100	Y ₹20
A	10	0
B	0	50
C	5	25

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B	0	50
C	5	25
D	2	40

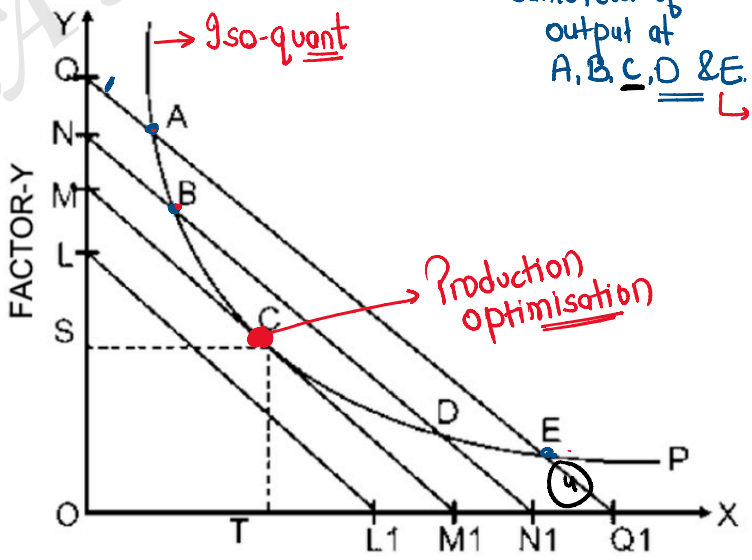


→ Optimisation-

1) Minimise the cost for producing given level of output

2) Maximize output for a given cost.

Suppose, output level is given = 1000 units
↳ Which factor combination to choose



Same level of output at A, B, C, D & E.
↳ Least cost Combination
↓
Iso-cost line is tangent to the Isoquant.

CA Hardik Marchanda

MCQs_13th Sep

9/13/2023

Multiple Choice Questions

24) If one unit of labour and one unit of capital give 200 units of output, two units of labour and two units of capital give 400 units of output and 5 units of labour and five units of capital give 1000 units of output then this is a case of

a) Increasing Returns to Scale
b) Constant Returns to Scale
c) Decreasing Returns to scale
d) None of the above

L	C	Output
1	1	200
2	2	400

25) Production Function: $Q = 4.L^{(1/2)}.K^{(2/3)}$

a) Increasing Returns to Scale
b) Constant Returns to Scale
c) Decreasing Returns to scale
d) None of the above

$4.L^{1/2}.K^{2/3}$

$\frac{1}{2}+\frac{2}{3}=\frac{3+4}{6}=\frac{7}{6}>1$

Multiple Choice Questions

26) If a firm moves from one point on a production isoquant to another, which of the following will not happen:

a) A change in the ratio in which the inputs are combined to produce output
b) A change in the ratio of marginal products of the inputs – Cost
c) A change in the marginal rate of technical substitution
d) A change in the level of output

C	L
MP ↓ 1	12 → MP
MP ↓ 2	8 → MP

Kartik Manchanda

x —— x Thursday - Rev + MCQ, Sunday - Test | Sat Rev. Consignment. Sunday Test

MCQs

15 September 2023 21:04

MCQs_15th Sep

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Multiple Choice Questions

27) Which of the following is not characteristics of Land

a) It is a passive factor
b) It has multiple uses
c) It's supply is fixed
d) It is a active factor

28) Capital is a

a) Stock concept
b) Flow concept
c) Both a and b
d) None of the above

Multiple Choice Questions

29) Which of the following is not included in the stages of capital formation

a) Savings
b) Mobilization of income
c) Mobilization of savings
d) Investments

30) Which is not the function of an entrepreneur?

a) Initiating a business enterprise and resource co-ordination
b) Risk bearing or uncertainty bearing
c) Innovation
d) Mobilization of savings

Gayatri Manchanda

Multiple Choice Questions

31) Which of the following is the best definition of "production function" ?

a) The relationship between market price and quantity supplied
b) The relationship between the firm's total revenue and the cost of production.
c) The relationship between the quantities of inputs needed to produce a given level of output
d) None of the above

32) A firm's production function:

a) Show how much output and the level of input required for the firm to maximize profits
b) Establishes the minimum level of output that can be produced using the available resources
c) Shows the maximum output that can be produced with a given amount of inputs with available technology
d) Shows labour force which is employed

Multiple Choice Questions

33) What is a production function?

a) Technical relationship between physical inputs and physical output.
b) Relationship between fixed factors of production and variable factors of production
c) Relationship between a factor of production and utility created by it.
d) Relationship between quantity of output produced and time taken to produce the output.

34) The short run, as economists use the phrase, is characterized by:

a) At least one fixed factor of production and firms neither leaving or entering the industry
b) Generally a period which is shorter than one year
c) All factors of production are fixed and no variable inputs.
d) All inputs are variable and production is done in less than one year.

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Multiple Choice Questions

35) A fixed input is defined as:

a) That input whose quantity can be quickly changed in the short run, in response to the desire of the company to change its production

b) That input whose quantity cannot be quickly changed in the short run, in response to the desire of the company to change its production

c) That input whose quantities can be easily changed in response to the desire to increase or reduce the level of production

d) That input whose demand can be easily changed in response to the desire to increase or reduce the level of production.

Multiple Choice Questions

36) The marginal product of a variable input is best described as:

a) Total product divided by the number of units of variable input - AP

b) The additional output resulting from one unit increase in the variable input

c) The additional output resulting from one unit increase in both the variable and fixed inputs

d) The ratio of the amount of the variable input that is being used to the amount of the fixed input that is being used.

37) If the marginal product of labour is below the average product of labour, it must be true that:

AP > MP

a) The marginal product of labour is negative

b) The marginal product of labour is zero

c) The average product of labour is falling

d) The average product of labour is negative.

CA Rastogik Manchanda

Multiple Choice Questions

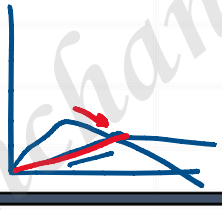
38) In the short run, the firm's product curves show that:

a) Total product begins to decrease when average product begins to decrease but continues to increase at a decreasing rate

b) When marginal product is equal to average product, average product is decreasing but at its highest

c) When the marginal product curve cuts the average product curve from below, the average product is equal to marginal product

d) In stage two, total product increases at a diminishing rate and reaches maximum at the end of this stage.



Multiple Choice Questions

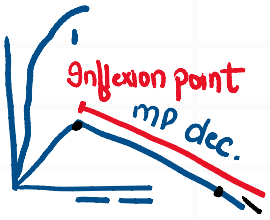
39) Which of the following statements is true?

a) After the inflection point of the production function, a greater use of the variable input induces a reduction in the marginal product

b) Before reaching the inevitable point of the decreasing marginal returns, the quantity of output obtained can increase at an increasing rate

c) The first stage corresponds to the range in which AP is increasing as a result of utilizing increasing quantities of variable inputs

d) All the above



CA Ashutosh Manchanda

Multiple Choice Questions

Use the following information to answer question from 40-42

Hours of Labour	Total Output	Marginal Product
0	–	–
1	100	100
2	180	80
3	240	–

40) What is the total output when 2 hours of labour are employed?

a) 80
b) 100
c) 180
d) 200

CA Hardik Manchanda

Multiple Choice Questions

Use the following information to answer question from 40-42

Hours of Labour	Total Output	Marginal Product
0	–	–
1	100	100
2	180	80
3	240	60

41) What is the marginal product of the third hour of labour?

a) 60
b) 80
c) 100
d) 240

Multiple Choice Questions

Use the following information to answer question from 40-42

Hours of Labour	Total Output	Marginal Product
0	–	–
1	100	100
2	–	80
3	240	–

42) What is the average product of the first three hours of labour?

a) 60
b) 80
c) 100
d) 240

$\frac{240}{3}$

Multiple Choice Questions

43) The production process describes below exhibits:

Number of Workers	Output TP	MP
0	0	-
1	23	23
2	40	17
3	50	10

a) Constant marginal product of labour
b) Diminishing marginal product of labour
c) Increasing returns to scale
d) Increasing marginal product of labour

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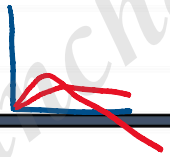
Multiple Choice Questions

44) Diminishing marginal returns for the first four units of a variable input is exhibited by the total product sequence:

a) 50, 50, 50, 50
b) 50, 110, 180, 260
c) 50, 100, 150, 200
d) 50, 90, 120, 140

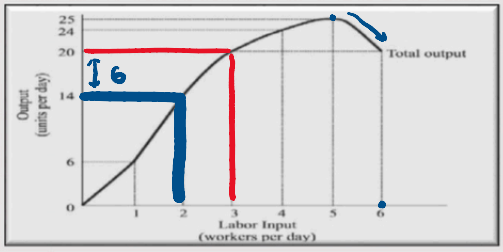
45) In the third of the three stages of production:

a) The marginal product curve has a positive slope
b) The marginal product curve lies completely below the average product curve
c) Total product increases
d) Marginal product is positive



Multiple Choice Questions

46) Use the following diagram to answer the question given below it:



The marginal product of the 3rd unit of labour is ___, the MP of ____ labour is negative

a) Six; fourth
b) Six ; third
c) Six; fifth
d) Six; sixth

CA Hardik Manchanda

Multiple Choice Questions

47) Which capital performs its function in production in a single use and is not available for further use?

a) Social capital
b) Tangible capital
c) Intangible capital
d) Circulating capital

48) Paul H. Douglas and C.W. Cobb of the USA studied the production function of the:

a) African Manufacturing industry
b) American Manufacturing industry
c) Indian Manufacturing industry
d) All of the above

Multiple Choice Questions

49) Cobb and Douglas assumed that:

a) Returns to scale are constant
b) Returns to scale are diminishing
c) Returns to scale are increasing
d) Returns to scale are negative

50) According to _____, the true function of an entrepreneur is to introduce innovations:

a) Schumpeter
b) James bates
c) Alfred Marshall
d) Hickes and Allen

Chetanik Manchanda