Supply

21 August 2023 21:12

Supply

Me → iphones
└ Production iphone 15 - 10,000 units

Willingness to offer X

Supply X

Mr. X → iphone 14 → willingness to offer ✓
→ Ability to offer X

Supply X

Supply → Amt of goods or services that the producers are willing & able to offer to the market at various prices, during a given period of time.

Imp points:

- 100 luxury cars - Supply
  ↓
  40 cars sold - X

1) Supply ≠ Sale
What is offered may not get sold.

2) Supply is a flow concept

* Determinants of Supply:

1) Price of the good:

Ceteris paribus,

Price ↑, Supply ↑
Price ↓, Supply ↓

} Direct relation b/w price & Supply.

- More price means more profit.

2) Prices of Related Goods:

2] Prices of Related Goods

~~Sub~~ ~~Comp~~

Ex-1

Land

Supply ↓ ← Wheat ✓

Tomato Price ↑ → Supply ↑

Ex-2

70% Petrol

30% EVs

Factory

Automobiles

→ Cars → Petrol / Diesel → Supply ↓

→ EVs – Price ↑ → Supply ↑ → >50% EV

* Price of other goods ↑, they become more profitable to the firm. Supply will increase for the other goods.
→ Supply of Wheat / Petrol Car will decrease.

3) Factors of Production: – Cost ↓ – Profit ↑ → Supply ↑

Factors – Price	Land	Labour	Capital	Entrepreneur
	Rent	Wages	Int.	Salary / Profit

→ Lower cost → More Profit – Encourage existing firms to expand production
→ New firms enter the Market.

Imp →

Radheshyam – Farming – ₹100 – >50 – Land

Land, Price ↑ Rent

Adnani – Automob Industr. – ₹100 – ₹2 Land, ₹98 other

* Rise in price of a particular factor of production

* Rise in price of a particular factor of production will cause increase in cost of those goods, that use a great deal of that factor.

4) State of Technology :-

Use of new technology, invention & innovations → ↑ in production efficiency
↓ production cost
↑ Profit ⇒ ↑ Supply

✓ → Availability of spare prod. capacity & the ease with which factor substitution can be made & the cost of such substitution also determine supply.

Ex- Laptop Mach. 80% capacity — Mach. 100% cap.
✓ 20% - spare prod. capacity

5) Govt. Policy:

↳ Taxes like excise duty, Sales Tax & import duty → Cost of prod. ↑
Profit ↓ - Supply ↓

→ Subsidies. → Reduce the cost of production
Supply ↑

6) - Nature of Competition & Size

Competitive — More sellers ↓ More Supply

Monopoly — One Seller ↓ Limited Supply

↓
More Supply

Limited Supply

7] Expectations: about future prices.

Expects fall in the prices → ↑ in Supply Today

↑ in Anticipated future price → ↓ in Supply Today

8] No. of Sellers - More no. of sellers → More Supply

Less no. of Sellers → Less Supply

9] Other factors: a] Govt. Industrial & foreign policy

b] Infrastructural facilities

c] Goal of the firm
↙ Revenue Max.
↘ Profit Max.

d] Natural factors such as
Weather, floods, etc.

e] Man-Made factors:
→ War, Labour strike.

× ═══ ×

* LAW OF SUPPLY

– Willingness to Supply depends on the:

a] Cost of production for add. unit of goods

b] Price at which goods can be

of goods

b] Price at which goods can be sold.

→ Greater the diff. b/w these two - greater is the willingness to supply.

Law of Supply - Ceteris Paribus.

The qty of a good produced & offered for sale will increase as the price of the goods rises & decrease as price falls.

Price ↑, Supply ↑ } Direct
Price ↓, Supply ↓ } Relation

→ Behaviour of supply also affected by time period under consideration.

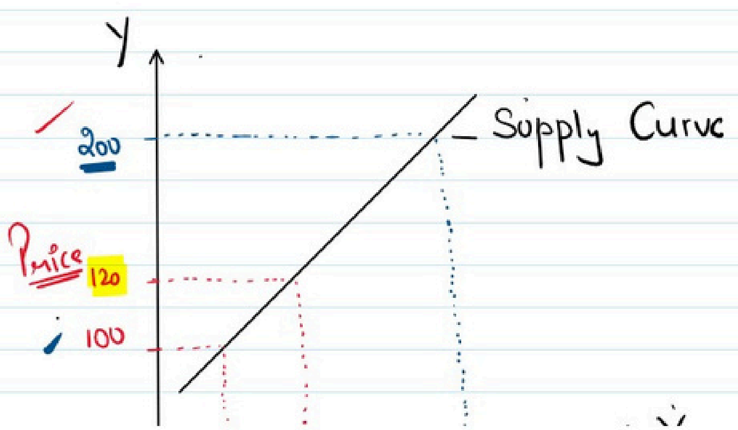
Short Run
Not easy to increase supply

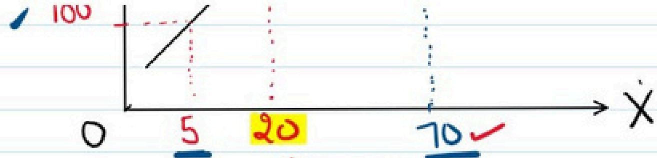
Long Run
Supply can be easily adjusted.

→ Supply Schedule

Ex- Sunglasses

Prices	Qty supplied
100	5
120	20
150	50
200	70





The Supply curve Shows:

a) highest Quantity willingly supplied by suppliers at each price.

b) Minimum price which will induce Suppliers to offer various quant. for Sale

Market Supply – Sum of supplies made by all Individual firms.

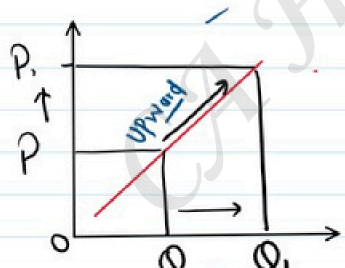
→ Amt. of commodity Supplied per time period at various prices by all the producers in the market.

x —— x

→ Movement on the Supply Curve

→ Due to change in own prices

→ Change in Quantity Supplied



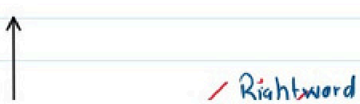
↳ Inc. in Qty. Supply
- Expansion of supp.

↑ Price → Expansion of Supply
→ upward movement

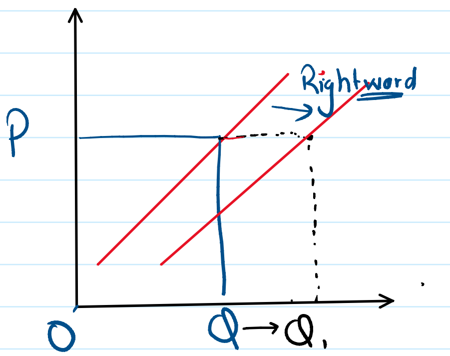
↓ Price → Contraction of supply
- Downward Movement.

→ Shift in Supply Curve

→ Change in Supply, due to factors other than own prices.



... other than own price.



Increase in Supply → Rightward Shift
Dec. in Supply → Leftward Shift

→ Elasticity of Supply

Responsiveness of the Qty supply of a good to a change in its price

$$\varepsilon_s = \frac{\%\text{ change in Qty Supplied}}{\%\text{ change in Price}}$$

$$= \frac{\Delta Q}{\Delta P} \times \frac{P_0}{Q_0}$$

→ ε_s will always be positive.

Ex- $P_0 = 2000$ — $Q_0 = 2500$
$P_1 = 2100$ $Q_1 = 3000$ units

$$\varepsilon_s = \frac{\cancel{500}}{100} \times \frac{2000}{\cancel{2500}} = 4$$

Ex- $\varepsilon_s = 2$. $P_0 = 100$ ↓ $Q_0 = 2000$ ↓
$P_1 = 80$ $Q_1 = ?$

$$2 = \frac{\Delta Q}{-20} \times \frac{1\cancel{00}}{20\cancel{00}}$$

$\Delta Q = -800 = Q_1 - Q_0 = -800$
$Q_1 = -800 + 2000 = \underline{1200}$

$Q_1 = \underline{1200}$

Ex- $\varepsilon_s = 5$, $\%\Delta$ in Price $= 20$
$Q_0 = 100$ $Q_1 = ?$

$$5 = \frac{\%\Delta\text{ in Qty}}{20}$$

$\%\Delta$ in Qty $= 100$

$$\frac{Q_1 - Q_0}{Q_0} \times 100 =$$

$Q_1 - 100 \cdot 100 = 100$

Q_0

$\frac{Q_1 - 100}{100} \times 100 = 100$

$Q_1 - 100 = 100$

$\underline{Q_1 = 200}$

* Point Elasticity

→ Elasticity is to be measured at a given price or b/w two prices, where Δ in price is very small.

$$E_s = \frac{dq}{dp} \times \frac{p}{q}$$

Supply function, $q = -10 + 10p$, When price is ₹15

$q = -10 + 150 = 140$

$$E_s = \frac{d(-10+10p)}{dp} \times \frac{15}{140}$$

$$= \left[\frac{d(-10)}{dp} + \frac{d(10p)}{dp}\right] \times \frac{15}{140}$$

$$0 + 10 \times \frac{15}{140} = 1.07$$

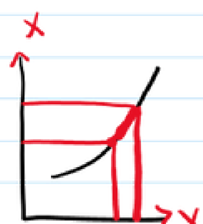
Ex- $q = -20 + 40p$, When price is ₹10

$$E_s = 40 \times \frac{10}{380}$$

$= 1.05$

* Arc elasticity

- Elasticity of supply b/w 2 prices.



- Elasticity over 'a' 'range' or 'arc' of the supply curve.

$$E_s = \frac{\Delta Q}{\Delta P} \times \frac{P_0+P_1}{Q_0+Q_1}$$

Ex- $P_0 = 10$ $Q = 20$

Ex- $P_0 = 10$, $P_1 = 15$; $Q = 20$, $Q = 50$

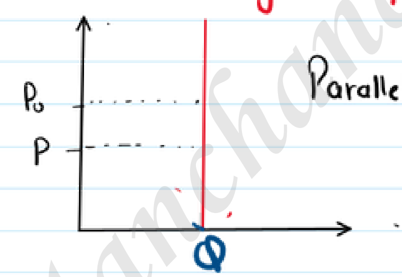
$= E_s = \frac{30}{5} \times \frac{25}{70} = 2.14$

→ Types of Supply Elasticity

1. Perfectly Inelastic Supply : No change in supply due to change in price.

$E_s = 0$.

* Perishable Goods
* Artistic work



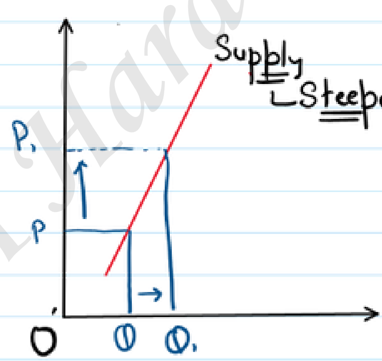
Parallel to Y axis.

2. Relatively less Elastic Supply - Inelastic supply

$E_s < 1$ — % Δ in Supply < % Δ in Price

- Qty is not very responsive to price.

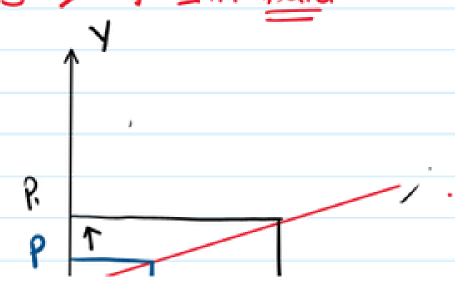
Ex-
Electronic devices
↓
Raw Mat. is imported
- Automobiles

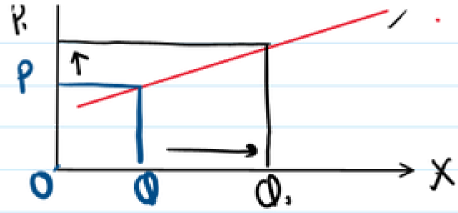


3. Relatively Greater elastic supply - Elastic supply

% Δ in QS > % Δ in Price — $E_s > 1$

Ex- Biscuit, Chips

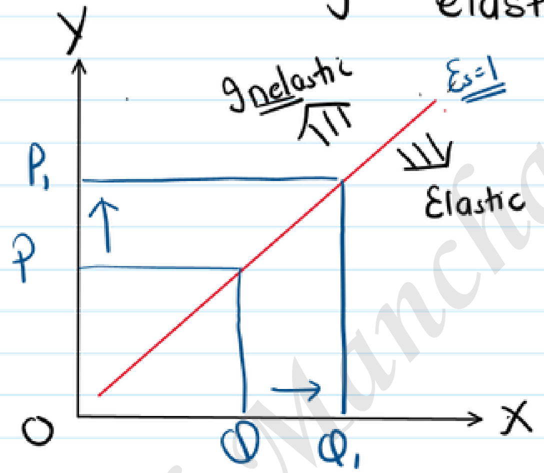




4. Unit - elastic

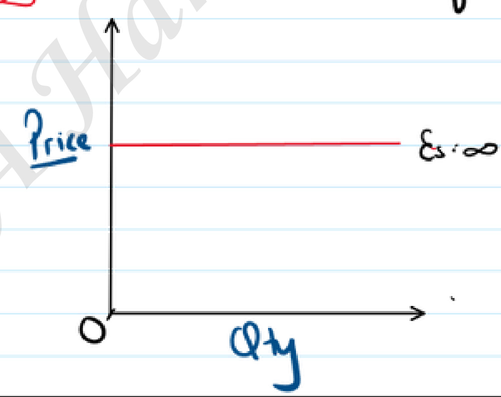
$E_s = 1$ % Δ Qs = % Δ in Price

→ Dividing line b/w the elastic & inelastic ranges.



5. Perfectly elastic curve
↓
$E_s = \infty$

└ Infinitesimally change in price result in infinite large qty supply.



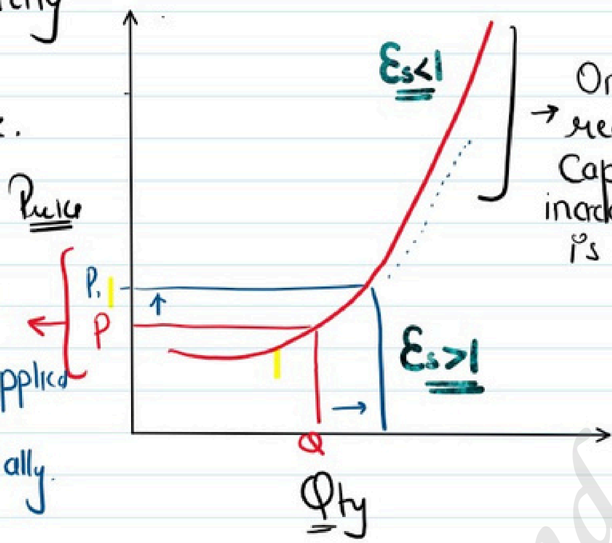
Parallel to X-axis

$\boxed{\text{Supply curve gets flatter, elasticity rises.}}$

* **Important**

1. In some cases, elasticity of Suppl is not

1. In some cases, elasticity of supply is not constant, but varies over supply curve.



In this region, firms have idle capacity & when price rises, Qty. supplied is increased Substantially.

Once the firm reaches the full capacity, further increase in prod. is possible only by extra investment.

To induce firms to increase output, prices must rise substantially.

x————x

→ Determinants of Elasticity of Supply

↳ E_s depends on the flexibility sellers have, to change the supply.

→ The more easily sellers can change the quantity, - greater the elasticity

1. Production cost & process :- - If increase in production causes substantial inc in costs, - price elasticity will be less.

→ If cost remains constant as output increases - elastic.

→ Products that have more complex process & takes longer time to produce - Less elastic
Coal
Building

2. Time period: * Shorter time period to adj supply - less elastic - Insufficient time to find resources

* Longer time period - More elastic - Firms can build new plants.

3. Degree of competition: More producers & high degree of competition - More elastic

- Few barriers of entry into the Market. - Elastic
Coffee

4. Spare Capacity - Spare prod. cap. available - Elastic

5. Availability of Resources -

Raw Mat & inputs are easily & cheaply available - elastic

- Diff to procure resources - Inelastic

& cheaply available – Elastic

- Diff. to procure resources economically – Inelastic

6. Storage: Those commodities which can be easily & inexpensively stored — Elastic

- Highly perishable Goods – Food Prod. - vegetable – Perfectly Inelastic

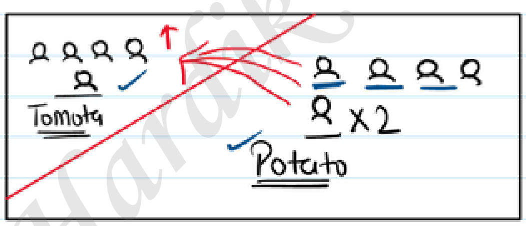
7) Factor Substitution:

- Factor of production can easily Substitute – Elastic

→ If production process involves resources which are highly specialised. – Inelastic

→ Labour employed is Scarce, required to be highly skilled, longer training period → Inelastic.

8) Mobility of Resources: – Capital & Labour are occupationally mobile – Elastic



9) Expectation about future Prices: Expectation of Substantial rise in prices in future

↓

It will make the Seller respond less to the current rise in price – Inelastic

x——x

→ Equilibrium Price

↳ Eq. price in the market is determined by the interaction b/w Demand & Supply.

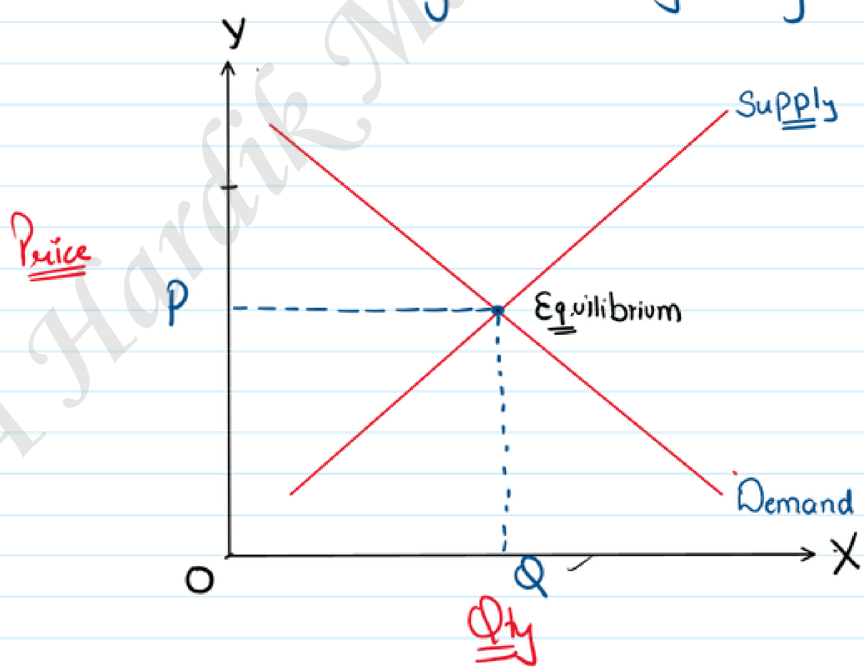
- Market Equilibrium

- Market Equilibrium
- Market clearing Price
- Unique point

Ex- Kurti

Price	Qty Demand	Qty Supp	Impact on Price
1000	6	31	Downward ↓
800	12	25	Downward ↓
→ 500	19	19	Equilibrium
350	25	12	Upward

⇒ Equilibrium: At the Price, Amt that buyer are willing to buy = Amt Sellers are willing to sell.



→ The determination of Market Price is the central theme of Micro-economic analysis

Micro-Economic Theory = PRICE Theory.

* Market Equilibrium & Social Efficiency

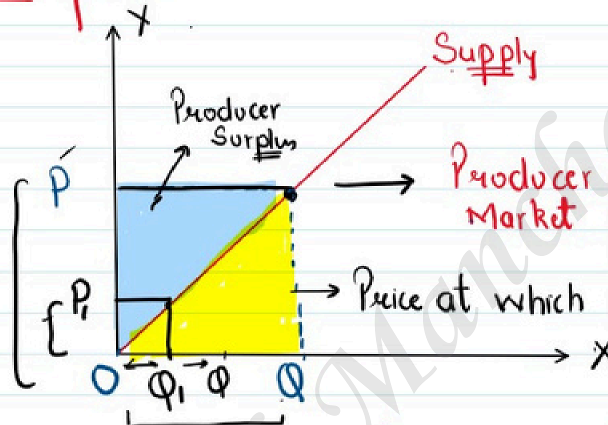
* Market Equilibrium & Social Efficiency

↓ Represents net gain to the Society

Consumer → Consumer Surplus

Producer → Producer Surplus

* Producer Surplus

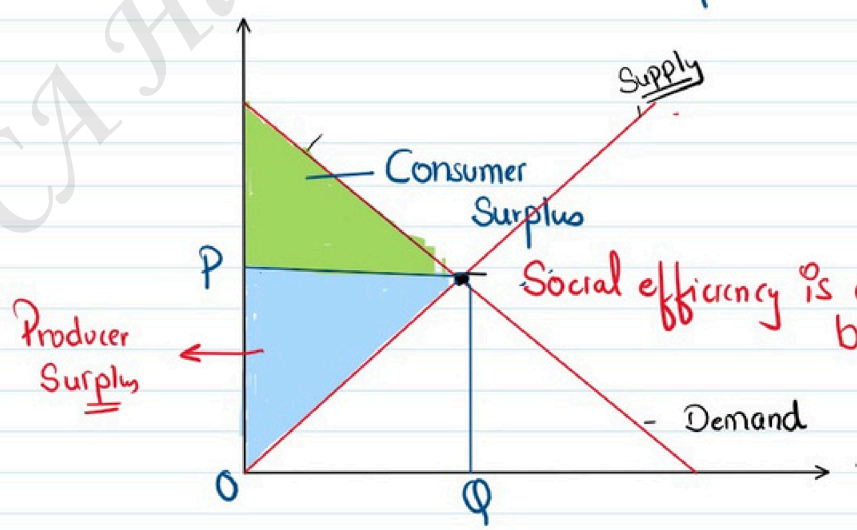


→ Producer Surplus disappears when Market price is at equilibrium

→ Price at which producers were ready to sell!

→ Benefit derived by producers from sale of units above & beyond their cost of producing that unit.

↓ Price they receive > Min. price at which they were ready to supply.



Social efficiency is achieved with both producers & consumers enjoying max. possible surplus.

× Chapter over ×

MCQs

26 August 2023 11:51

MCQs_26th Aug

Multiple Choice Questions

1) **Which of the following statements about price elasticity of supply is correct?**
   a) Price elasticity of supply is a measure of how much the quantity supplied of a good responds to a change in the price of that good
   b) Price elasticity of supply is computed as the percentage change in quantity supplied divided by the percentage change in price
   c) Price elasticity of supply in the long run would be different from that of short run
   d) All of the above

Multiple Choice Questions

Wages - ↑ - Cost ↑ - Supply

2) **Suppose that workers in a steel plant managed to force a significant increase in their wage package. How would the new wage contract be likely to affect the market supply of steel, other things remaining the same?**
   a) Supply curve will shift to the left
   b) Supply curve will shift to the right
   c) Supply will not shift, but the quantities of cars produced per month will decrease
   d) Supply will not shift, but the quantities of cars produced per month will increase

Avyukt
Education For All

Multiple Choice Questions

3) **A vertical supply curve parallel to Y axis implies that the elasticity of supply is:**

   a) Zero
   b) Infinity
   c) Equal to one
   d) Greater than zero but less than infinity

4) **An increase in the supply of a good is caused by:**

   a) Improvements in its production technology
   b) Fall in the prices of other goods which can be produced using the same inputs
   c) Fall in the prices of factors of production used in its production
   d) All of the above

Multiple Choice Questions

5) **Commodities which can be easily and inexpensively stored without losing value may have**

   a) Inelastic supply
   b) Perfectly inelastic supply
   c) Elastic supply
   d) Any of the above

Imp

6) **The market demand curve for a competitive industry is: Qd = 12-2P and the market supply curve is: Qs = 3+P. The market will be in equilibrium if**

   a) P = 6 and Q = 9
   b) P = 5 and Q = 2
   c) P = 4 and Q = 4
   d) P = 3 and Q = 6

6

$12-2p = 3+p$

$9 = 3p \Rightarrow P = 3 . Q = 6$

$12-6 = 6$

Multiple Choice Questions

7) Elasticity of supply refers to the degree of responsiveness of supply of a good to change in its:

a) Demand
b) Price
c) Cost of production
d) State of technology

8) A horizontal supply curve parallel to the quantity axis implies that the elasticity of supply is: X-

a) Zero
b) Infinite
c) Equal to one
d) Greater than zero but less than one

Multiple Choice Questions

9) Contraction of supply is the result of:

a) Decrease in the number of producers - Shift
b) Decrease in the price of the goods concerned
c) Increase in the prices of other goods Leftword Shift
d) Decrease in the outlay of seller - Righ Shift

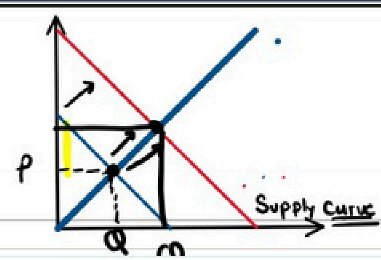
Exp

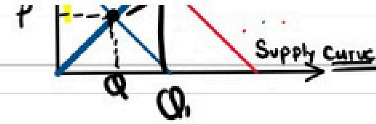
Imp

10) An increase in the demand for computers, other things remaining the same, will:

Supply

a) Increase the number of computers bought
b) Decrease the price but increase the number of computers bought
c) Increase the price of computers
d) Increase the price and number of computers bought.





Multiple Choice Questions

11) The quantity supplied of a good or service is the amount that:

a) Is actually bought during a given time period at a given price
b) Producers wish they could sell at a higher price
c) Producers plan to sell during a given time period at a given price
d) People are willing to buy during a given time period at a given price.

12) Supply is the

a) Limited resources that are available with the seller
b) Cost of producing a good
c) Entire relationship between the quantity supplied and the price of the good
d) Willingness to produce a good if the technology to produce it becomes available

Multiple Choice Questions

shift

13) In the book market, the supply of books will decrease if any of the following occurs except:

a) A decrease in the number of books publisher Supply ↓
b) A decrease in the price of the book - Contraction
c) An increase in the future expected price of the book ↓
d) An increase in the price of paper used ↓

14) If price of computers increases by 10% and supply increases by 25%. The elasticity of supply is:

$\frac{25}{10} = 2.5$

a) 2.5
b) 0.4
c) -2.5
d) -0.4

Multiple Choice Questions

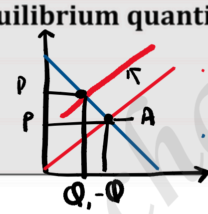
15) An increase in the number of sellers of bikes will increase the

a) The price of a bike
b) Demand for bikes
c) The supply of bikes
d) Demand for helmets

Imp

16) If the supply of bottled water decreases, other things remaining the same, the equilibrium price _______ and the equilibrium quantity______

a) Increases; decreases
b) Decreases; increases
c) Decreases; decreases
d) Increases; increases



Multiple Choice Questions

Imp

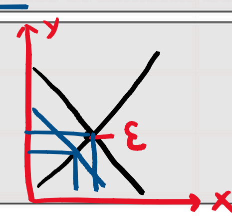
17) A decrease in the demand for cameras, other things remaining the same will:

Market

a) Increase the number of cameras bought
b) Decrease the price but increase the number of cameras bought
c) Decrease in quantity of cameras demanded
d) Decrease the price and decrease in the number of cameras bought

18) In a very short period, the supply

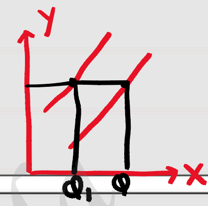
a) Can be changed
b) Can not be changed
c) Can be increased
d) None of the above



Multiple Choice Questions

19) When supply curve moves to the left, it means

a) Lesser quantity is supplied at a given price
b) Larger quantity is supplied at a given price
c) Prices have fallen and quantity is supplied at a lower price
d) None of the above



20) The elasticity of supply is defined as the

a) Responsiveness of the quantity supplied of a good to a change in its price
b) Responsiveness of the quantity supplied of a good without change in its price
c) Responsiveness of the quantity demanded of a good to a change in its price
d) Responsiveness of the quantity demanded of a good without change in its price

Multiple Choice Questions

21) Elasticity of a supply is zero means

a) Perfectly inelastic supply
b) Perfectly elastic supply
c) Imperfectly elastic supply
d) None of the above

22) Elasticity of supply is greater than one when

a) Proportionate change in quantity supplied is more than the proportionate change in price
b) Proportionate change in price is greater than the proportionate change in quantity supplied $E_s < 1$
c) Change in price and quantity supplied are equal $E_s = 1$
d) None of the above

Multiple Choice Questions

23) **The supply function is given as Q = -100 + 10P. Find the elasticity using the point method, when price is Rs. 15**

$Q = -100 + 150 = 50$

$E_s = 10 \times \frac{15}{50} = \frac{150}{50}$

a) 4
b) -3
c) -5
d) 3

24) **The supply curve shifts to the right because of _______**

Increase

a) Improved technology
b) Increased price of factors of production Cost ↑ Supply ↓
c) Increased excise duty Supply ↓
d) All of the above

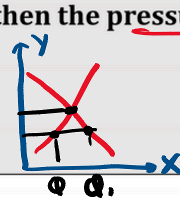
Multiple Choice Questions

25) **Which of the following statement is correct?**

a) When the price falls the quantity demanded falls ↑
b) Seasonal changes do not affect the supply of the commodity
c) Taxes and subsidies do not influence the supply of the commodity
d) With lower cost, it is profitable to supply more of the commodity

26) **If the demand is more than supply, then the pressure on price will be:**

a) Upward
b) Downward
c) Constant
d) None of the above



Multiple Choice Questions

27) The supply curve for highly perishable commodities during very short period is generally

a) Elastic
b) Inelastic
c) Perfectly inelastic
d) Perfectly elastic

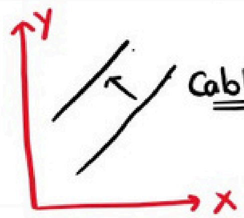
28) Supply is a ________ concept:

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

Multiple Choice Questions

29) Data on production of vegetables for the past two years showed that, despite stable prices, there is a substantial decline in output of cabbage leading to lower supply into the market. Which of the following can possibly be the reason?

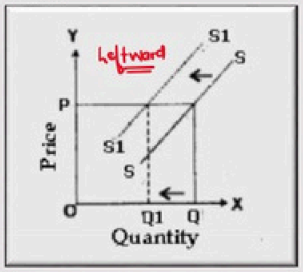
a) An increase in the price of cauliflower which is equally preferred by consumers
b) Announcement of a subsidy by government on vegetable production
c) More farmers producing cabbage and the increasing competition among them
d) A substantial decrease in the price of capsicum



Cabbage – Cauliflower ↑

Multiple Choice Questions

30) **Which of the following alternatives would be true if the event presented in the following diagram occurs?**



Supply ↑

a) A fall in wage costs of the firm along with a fall in consumer incomes
b) A shortage of raw materials and consequent increase in raw material price Supply ↓
c) An increase in subsidy by the government and a reduction in taxes
d) Decrease in the market price of the commodity in question

Contraction

Multiple Choice Questions

31) **If a short run supply curve is plotted for the following table which presents price and quantity of fighter aircrafts, what will be its shape?**

Price in millions of $	Number of Aircrafts
124	28
140	28
150	28
160	28
175	28

- Perfectly Inelastic

a) Horizontal straight line parallel to the quantity axis
b) Steeply rising with elasticity less than one
c) Vertical straight line parallel to Y axis
d) A perfectly elastic supply curve

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Education For All

Multiple Choice Questions

Supply ↑

32) **A new technique of production reduces the marginal cost of producing paper. How will this affect the supply curve of writing material like notebook, register & notepad, etc.?**
   a) Upward movement on same supply curve
   b) Downward movement on same supply curve
   c) Leftward shift in supply curve
   d) Rightward shift in supply curve

33) **Which of the following has the lowest price elasticity of supply?**
   a) Luxury
   b) Necessities
   c) Salt
   d) Perishable goods = 0

Multiple Choice Questions

9mk $\Delta Y/\Delta X$ → $\Delta P/\Delta Q$

34) **Slope of supply curve is 0.6, calculate elasticity of supply when initial price is Rs. 30 per unit and initial quantity is 100 units.**
   a) 0.5
   b) 5.5
   c) -0.5
   d) -0.18

$E_s = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q}$

$= \frac{1}{0.6} \times \frac{30}{100}$

35) **Supply will be ________ if firms are not working to full capacity**
   a) Inelastic
   b) Perfectly inelastic
   c) Elastic
   d) Any of the above

Spare cap

x———x

[Test Disc + NPO]

Ch-2 — Dem. / Cons. / Supply

Ch-2 — Cons
— Supply