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SOLUTIONS BOOK

CLASS 9

Social Science · Understanding Society

CHAPTER 9

The Price Puzzle: What Drives the Market

Complete Questions and Activities Solutions

In-text Questions

Questions and Activities

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Every question is followed by its answer. Question numbers above are clickable and the PDF bookmarks panel lets you jump to any exercise set or question. Figures are reproduced from the NCERT textbook (© NCERT) for educational use.

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1.1

CLASS 9 SOCIAL SCIENCE · CHAPTER 9

In-text Questions

Solutions · 15 questions

Directions (Questions 1–15): These are the questions that appear inside the chapter (The Big Questions, Don’t Miss Out, Think About It, Let’s Explore, Let’s Analyse and Let’s Recall), numbered in the order in which they appear. Many are open-ended; model answers based on the chapter are given, and you may add examples from your own surroundings.

QUESTION 1 *The Big Questions · p. 195*

What are the factors that influence the demand for and supply of goods and services in a market?

ANSWER

Demand and supply each depend on the price of the good itself and on several other factors. When these other factors change, people want to buy, or sellers want to offer, different quantities even at the same price.

a Factors that influence demand

Factor	How it affects demand	Example from the chapter
Price of the good	Price rises, quantity demanded falls; price falls, quantity demanded rises (Law of Demand)	Srivalli buys 1 kg of mangoes at ₹150 and 3 kg at ₹50
Price of related goods	If the price of a **substitute** rises, demand for the other good rises. Complements are used together, so their demands move together	Tea and coffee (substitutes); smartphones and earphones (complements)
Income	When household income rises, people can buy more or choose higher-quality products	Quantity demanded of several goods rises even if prices stay the same
Taste, preference and population	Every buyer has specific tastes; the size and composition of the population shape what is demanded	Srivalli will not replace mangoes by oranges; more children, more demand for sports shoes
Seasonality	Demand changes with weather, festivals and cultural habits	Crowded bookshops at the start of a session; sweaters in winter

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Factor	How it affects demand	Example from the chapter
Future price expectations	Expecting a fall in price, buyers postpone; expecting a rise, they buy now	People delay buying durables before Diwali expecting discounts

b Factors that influence supply

Factor	How it affects supply	Example from the chapter
Price of the good	Higher price raises profit, so producers supply more and new firms enter (Law of Supply)	A seller offers 1 kg at ₹50, 2 kg at ₹100, 3 kg at ₹150
Price of related goods	Supply of one good depends on the profitability of the producer's alternatives	Low wheat price and high chickpea price: the farmer grows more chickpeas
Number of sellers	More sellers means more supply, so prices fall; fewer sellers means less supply, so prices rise	Competition and increased production
Technology	Better technology lowers the cost of production, so more is supplied	Drip irrigation, weather sensors, cold storage for mangoes
Future expectations	Expecting higher demand, producers produce more; expecting lower demand, they cut production	Potato wholesalers hold back stock expecting higher peak-season prices
Input costs and weather	These also change how much sellers can supply	Listed in "Before we move on"

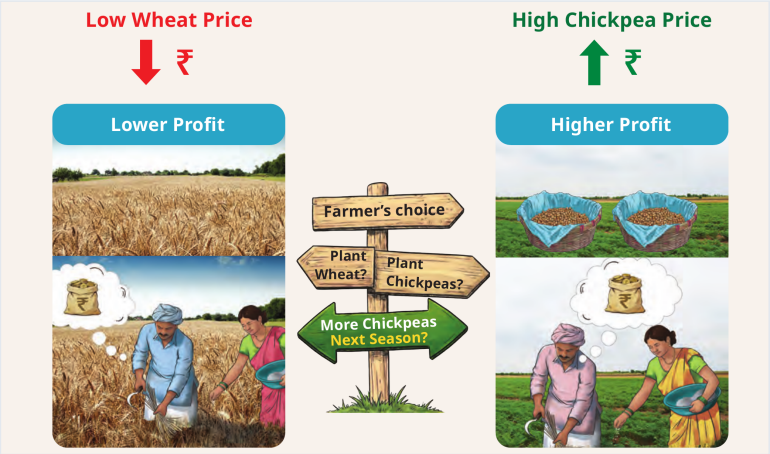


Fig. 9.6. Prices affecting supply decisions

Therefore, demand depends on price, related goods, income, tastes, population, seasonality and expectations; supply depends on price, related goods, number of sellers, technology, input costs, weather and expectations.

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QUESTION 2 *The Big Questions · p. 195*

How are prices of goods and services determined through demand and supply interactions?

ANSWER

Every market involves negotiation between what buyers are willing to pay and what sellers are willing to accept. Prices are therefore determined by the interaction between demand and supply.

a Excess demand, equilibrium and excess supply (Table 9.3)

Price (₹)	Qd (kg)	Qs (kg)	Comparison	Outcome	Gap (kg)
40	38	6	Qs < Qd	Excess demand	38 − 6 = 32
100	12	12	Qs = Qd	Market equilibrium	0
150	8	43	Qs > Qd	Excess supply	43 − 8 = 35

b What happens to the price

- **Supply less than demand:** prices rise (at ₹40 only 6 kg is supplied against 38 kg demanded).
- **Supply more than demand:** prices fall (at ₹150, 43 kg is supplied against 8 kg demanded).
- **Supply equals demand:** at ₹100 both are 12 kg, there is no pressure for the price to change and the market is ‘cleared’.
- The mango season shows this: at the start supply is low and mangoes are costly; mid-season supply increases and prices fall.

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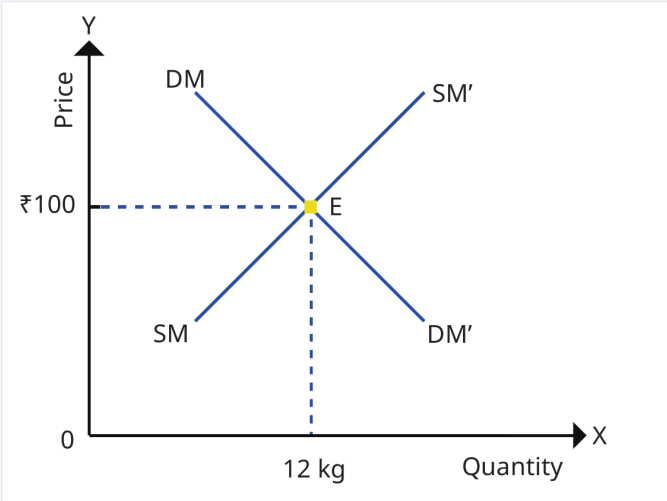


Fig. 9.7. Equilibrium: demand curve DMDM' meets supply curve SMSM' at point E

Therefore, price is determined where the quantity demanded equals the quantity supplied: in Table 9.3 the equilibrium price is ₹100 and the equilibrium quantity is 12 kg.

QUESTION 3 *The Big Questions · p. 195*

What is market equilibrium, and does it exist in the real world?

ANSWER

Market equilibrium is the point where the supply of goods and services equals demand. In theory it is where the demand and supply curves intersect; in the real world markets keep changing.

a Meaning

- Quantity demanded equals quantity supplied, so there is neither a shortage (excess demand) nor a surplus (excess supply).
- Prices tend to remain stable unless external factors change.
- In Fig. 9.7, equilibrium is at point E: equilibrium price = ₹100 and equilibrium quantity = 12 kg.

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b Does it exist in the real world?

Not as a fixed, stable point. Changes in technology, wages, interest rates, wars, political events, pandemics, weather and natural disasters alter demand and supply, so the market is always adjusting to a new equilibrium and never fully settles at the previous one.

c Example: face masks during COVID-19 (2020)

- Demand for face masks surged rapidly and supply could not catch up immediately, so the price rose significantly.
- Over time suppliers adjusted to the increased demand and prices fell.
- After the pandemic demand reduced further and prices returned to pre-pandemic levels.

Therefore, equilibrium is a useful idea (demand = supply), but in real markets it keeps moving as conditions change.

QUESTION 4 *The Big Questions · p. 195*

How and why does the government intervene in the market?

ANSWER

Markets allocate goods and services on the basis of willingness and ability to pay. They do not always work fairly, so the government steps in to ensure fairness and equity, particularly for vulnerable and low-income groups.

a Why the government intervenes

- Essential goods such as medicines may become very expensive and inaccessible to many.
- A single seller or a few sellers (monopoly) can charge higher prices, give poorer quality and restrict supply.
- Public goods (roads, parks, defence) are usually not provided by private companies because they do not generate direct profit.

b How the government intervenes

Way	What the government does	Example
Price ceiling	Sets a maximum price a seller can charge	Maximum prices of essential medicines; sanitisers capped at ₹100 for 200 ml in COVID-19
Price floor	Sets a minimum below which the price cannot fall	Minimum wage for workers

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Way	What the government does	Example
Checking monopoly	Keeps prices and quantity supplied in check	Regulation of dominant sellers
Regulators	Ensure transparency in the market	RBI (banking), CCPA (consumer rights), TRAI (telecom), SEBI (securities)
Public goods	Provides or funds goods that benefit everyone	Roads, bridges, parks, streetlighting, defence, sanitation, drainage

c Limits of intervention

Excessive intervention can distort prices and reduce producer incentives, impose compliance burdens, and discourage innovation and entrepreneurship.

Therefore, the government intervenes when markets fail (unaffordable essentials, monopolies, under-provided public goods) to protect fairness, but it must do so carefully.

QUESTION 5 *Don't Miss Out · p. 198*

Did you notice that the market demand curve is flatter than Srivalli's individual demand curve? Why is that?

ANSWER

Yes. In Fig. 9.3 the market demand curve DmDm' is flatter than Srivalli's curve DD', because market demand adds up the demands of many consumers.

a Individual and market demand (Table 9.1)

Price	Srivalli	Alex	Israt	Market demand
₹150	1 kg	2 kg	3 kg	6 kg
₹100	2 kg	4 kg	6 kg	12 kg
₹50	3 kg	6 kg	9 kg	18 kg
Change when price falls ₹150 to ₹50	+2 kg	+4 kg	+6 kg	**+12 kg**

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b Reason

Market demand QD = Q1 + Q2 + Q3. The same fall in price (₹100) makes Srivalli buy 2 kg more, but makes the market as a whole buy 12 kg more. A larger total quantity response for the same price change makes the market curve flatter and more responsive.

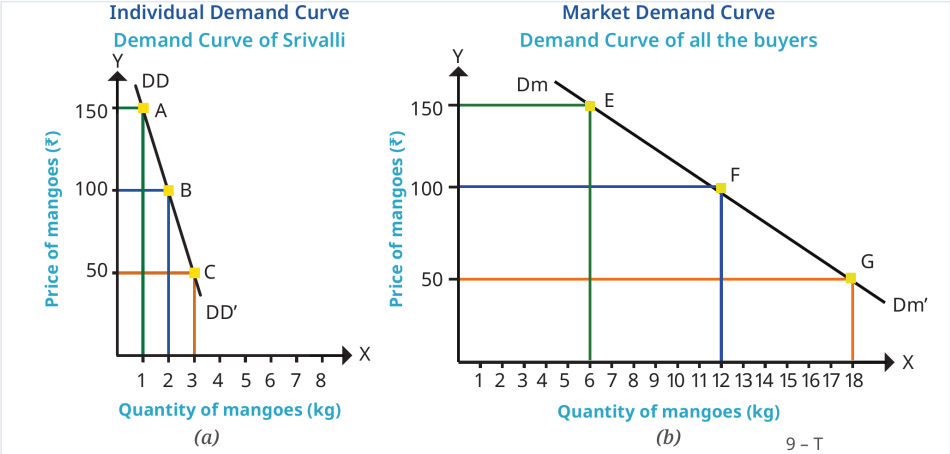


Fig. 9.3. Individual demand curve (a) and market demand curve (b)

Therefore, the market demand curve is flatter because it aggregates many consumers, so the same price change creates a larger total change in quantity.

QUESTION 6 *Think About It · p. 199*

What happens when you consume the first mango? It tastes delicious, right? The second one is good? The third one and so on? You are barely interested in eating mangoes by this point. Why do you think this happens?

ANSWER

The additional utility (usefulness or satisfaction) from a product declines as more of it is consumed. This is the principle of diminishing marginal utility.

a What happens with each mango

Mango	How it feels	Additional utility
First	Tastes delicious	Highest
Second	Good	Lower
Third and later	Barely interested	Very low

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b Link with demand

As the utility from each successive unit falls, the willingness to pay for it also decreases, so demand falls.

Therefore, interest in more mangoes falls because of diminishing marginal utility, which reduces willingness to pay and hence demand.

QUESTION 7 *Let's Explore · p. 200*

→ Create your own demand schedule for buying notebooks at different prices. At what price would you buy the most? At what price would you stop buying altogether? What could be the reason behind your choices?
→ Ask your family members if they postponed or advanced buying any product because of future expectations of changes in price?

ANSWER

This is an activity. A model schedule and model answers are given; replace the values with your own choices.

a Demand schedule for notebooks (model values)

Price per notebook (₹)	10	20	30	40	50	60	70
Notebooks I would buy	10	8	6	4	2	1	0

- **Buy the most:** at the lowest price (₹10, 10 notebooks).
- **Stop buying:** at ₹70 and above (model value).
- Reason: as the price falls I can afford more (Law of Demand), but I buy only as many as I need, because extra notebooks give less additional utility.

b Family members and future price expectations

- **Postponed:** buying a durable (such as an appliance) until the Diwali or New Year discounts, expecting the price to fall; this lowers present demand.
- **Advanced:** buying a product earlier because the price was expected to rise; this raises present demand.
- Ask at home and note the product, the expectation and the decision.

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Therefore, demand falls as price rises, and expectations of future prices make people postpone or advance purchases.

QUESTION 8 *Let's Explore · p. 203*

What happens to the supply of a product in case of a change in the cost of inputs, discovery of an alternate input, depletion of resources, change in weather, disaster, etc.? Discuss in class using examples of diverse goods and services.

ANSWER

Supply depends on how costly and available the inputs are. Anything that raises costs or makes production harder reduces supply; anything that lowers costs or helps production raises it.

a Effects on supply

Change	Effect on supply	Example
Rise in cost of inputs	Production is costlier and less profitable, so supply falls	Costlier fuel or labour makes a taxi service offer fewer trips
Fall in cost of inputs	Supply rises	Cheaper seeds or water lets farmers grow more
Discovery of an alternate (cheaper) input	Cost of production falls, so supply rises	A cheaper raw material for a factory
Depletion of resources	Inputs become scarce, so future supply falls	Overfishing and overuse of groundwater harm future supply
Favourable weather	Output rises, so supply rises	Good conditions for a crop
Bad weather or disaster	Production and transport are disrupted, so supply falls	Floods or drought destroying a crop

Therefore, higher costs, depleted resources, bad weather and disasters reduce supply, while cheaper or better inputs and favourable conditions increase it.

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QUESTION 9 *Let's Analyse · p. 204*

Using data from Table 9.3, plot the demand and supply curve at the three prices, i.e., ₹40, ₹100, and ₹150. Identify and mark excess demand and supply on the graph. Think about how equilibrium could be reached in these scenarios.

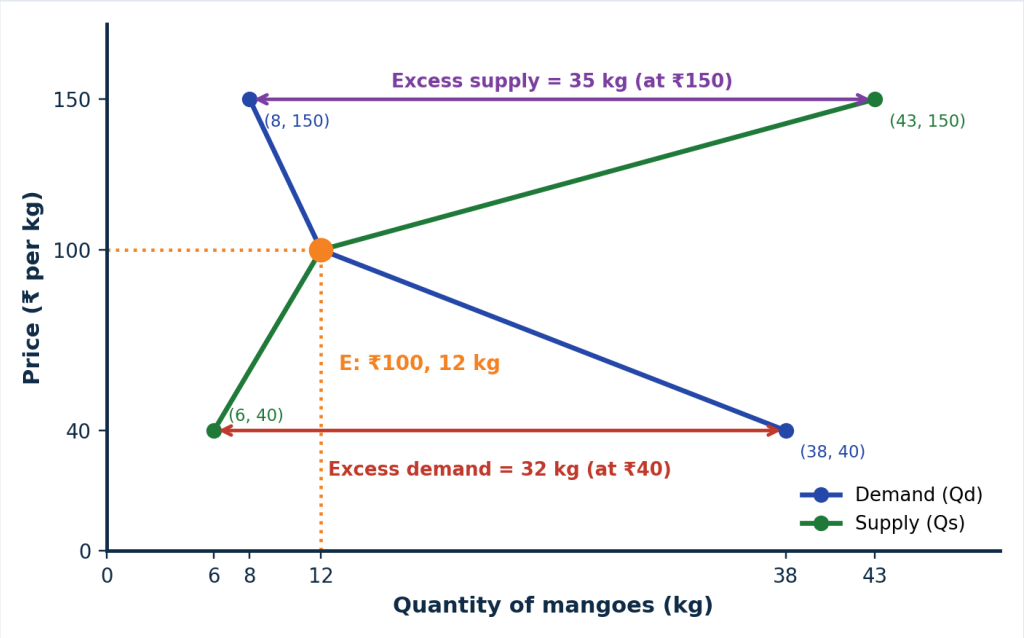
ANSWER

Plot price on the Y-axis and quantity on the X-axis. Mark the three demand points and the three supply points from Table 9.3 and join them.

a Points to plot

Price (₹)	Demand point (Qd, price)	Supply point (Qs, price)	Result
40	(38, 40)	(6, 40)	Excess demand = 32 kg
100	(12, 100)	(12, 100)	Equilibrium E
150	(8, 150)	(43, 150)	Excess supply = 35 kg

b Graph



Demand and supply from Table 9.3, with excess demand, excess supply and equilibrium E

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c How equilibrium is reached

- **At ₹40 (excess demand):** buyers want 38 kg but only 6 kg is supplied; supply is less than demand, so the price rises. As it rises, quantity demanded falls and quantity supplied increases until both are 12 kg at ₹100.
- **At ₹150 (excess supply):** sellers offer 43 kg but buyers want only 8 kg; supply exceeds demand, so the price falls. As it falls, quantity demanded rises and quantity supplied decreases until both are 12 kg at ₹100.

Therefore, the demand and supply curves meet at ₹100 and 12 kg; prices rise under excess demand and fall under excess supply until equilibrium is reached.

QUESTION 10 *Think About It · p. 205*

**Can you think of another real-life example (other than hotels) where prices change frequently? Explain why the prices keep changing.
Our choices today affect future resources. For example, high demand for fast fashion, overfishing and overuse of groundwater can harm future supply. So, should we focus only on short-term gains, or also think about long-term sustainability? How could this affect the market equilibrium?**

ANSWER

Prices change whenever demand or supply changes. Many everyday goods show this. The second part asks how today's choices affect future supply and equilibrium.

a Examples of frequently changing prices

Example	Why the price keeps changing
Vegetables (for example tomatoes)	Expensive in the morning but cheaper in the evening: fresh stock is limited early in the day, and sellers lower prices to clear unsold, perishable produce later
Onions	Price changes every few months as supply and demand change with seasons and weather
Mangoes	Costly at the start of the season when supply is low; cheaper mid-season when supply increases
Flight seats	The same seat can cost ₹3,000 on one day and ₹9,000 on another, depending on demand and the seats still available

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b Short-term gains versus long-term sustainability

- Using resources only for short-term gain (fast fashion, overfishing, overuse of groundwater) can harm future supply.
- When future supply falls, supply becomes less than demand, so prices rise and the equilibrium moves to a higher price with less quantity available.
- Thinking about long-term sustainability keeps supply available, so markets can continue to meet demand at reasonable prices.

Therefore, prices change with demand and supply, and we should think about long-term sustainability, because depleting resources today disturbs the equilibrium of tomorrow.

QUESTION 11 *Think About It · p. 206*

Have you ever seen or heard of the government fixing prices or wages (for example, bus fares, medicines, or minimum wages)? Share an example and why you think it was done.

ANSWER

Yes. The government fixes some prices and wages to protect consumers and workers. Model examples are given; you may add one from your own area.

a Examples and reasons

Example	Type	Why it was done
Medicines	Price ceiling (maximum price)	To prevent overcharging for essential goods
Minimum wage	Price floor (minimum wage)	To ensure workers earn enough for their hard work
Sanitisers in COVID-19	Price ceiling (₹100 for 200 ml)	To stop hoarding, black marketing and sharp price increases
Bus fares	Government-regulated fares	To keep travel affordable for ordinary people

Therefore, governments fix prices or wages to protect consumers from exploitation and workers from unfair pay.

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QUESTION 12 *Regulators · p. 206*

Do you remember some regulators from the Grade 7 Social Science textbook chapter ‘Understanding Markets’?

ANSWER

The chapter names four regulators and the area each looks after. Tick those that you recall from Grade 7 and add any others from your Grade 7 book.

a **Regulators named in this chapter**

Regulator	Sector it regulates
Reserve Bank of India (RBI)	Banking
Central Consumer Protection Authority (CCPA)	Violation of consumer rights and unfair trade practices
Telecom Regulatory Authority of India (TRAI)	Telecommunications sector
Securities and Exchange Board of India (SEBI)	Securities market

Therefore, regulators such as RBI, CCPA, TRAI and SEBI ensure transparency in their markets.

QUESTION 13 *Don’t Miss Out · p. 207*

How do such price controls affect suppliers and consumers? While in this case the price control was for an emergency, do you think such controls should be in practice forever?

ANSWER

During COVID-19 sanitisers were declared essential commodities and the maximum price was capped at ₹100 for a 200 ml bottle. Price controls help one side in the short run but can have costs.

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a Effect on consumers and suppliers

Group	Benefit	Possible cost
Consumers	Protected from overcharging; hoarding and black marketing are discouraged; sanitisers were soon available at fair prices	If the cap is too low, shortages can occur
Suppliers	Companies started production, so more supply reached the market	They cannot charge above the cap and may lose the motivation to supply or innovate

b Should such controls stay forever?

No. In an emergency a price cap protects people. But when the government fixes a price below the market level, producers may lose motivation to supply, leading to reduced production and shortages, and heavy price control discourages innovation. Such controls should therefore be temporary and reviewed once supply returns to normal.

Therefore, emergency price controls protect consumers, but if kept forever they can reduce supply and innovation.

QUESTION 14 *Let's Explore · p. 207*

From your surroundings, list two goods or services that are provided by the government (for example: roads, streetlights, parks, police, and so on.). Choose one of the goods you listed and answer:
→ Who does benefit from it?
→ Why would it be difficult for a private company to provide this service on its own?
→ Imagine the government stops providing this good or service, what problems might people in your area face?

ANSWER

Model answer using roads and streetlights. Choose the one answer you need (here: roads) and give examples from your own area.

a Two goods or services

- Roads
- Streetlights

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b Answers for roads

Question	Answer
Who benefits?	All citizens: commuters, students, farmers and traders moving goods, and emergency vehicles
Why is it difficult for a private company?	Public goods usually do not generate direct profit, and many people think “others will pay and I can use it without paying”, so enough money is not collected (as in the park example)
If the government stopped providing it	Roads would be poorly maintained, travel and transport of goods would become difficult and unequal, and access to essential services would suffer

Therefore, goods that benefit everyone, such as roads, need government provision or funding for social welfare and equal access.

QUESTION 15 *Let’s Recall · p. 208*

In the chapter ‘Democracy’, you have read that a democratic government is accountable to the people and is expected to act in their interest.
→ According to you, how should a democratic government decide when and how much it should intervene in markets to protect people’s welfare?
→ Whose voices should a democratic government consider while making such decisions—consumers, producers, workers, or others? Why?

ANSWER

This is an opinion question. A model answer based on the chapter is given.

a When and how much to intervene

- Intervene when markets fail: essentials become unaffordable, public goods are under-provided or monopolies arise.
- Intervene only as much as needed, since excessive regulation can distort prices, burden small businesses and discourage innovation.
- Keep emergency controls temporary and review them regularly.

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b Whose voices to consider

Group	Why their voice matters
Consumers	Affordability and fairness of prices
Producers and small businesses	Costs, incentives and compliance burdens
Workers	Fair wages
Vulnerable and low-income groups	Access to essentials; the government is accountable to all the people

Therefore, a democratic government should balance the voices of consumers, producers and workers, intervening only when and as much as needed to protect welfare.

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1.2

CLASS 9 SOCIAL SCIENCE · CHAPTER 9

Questions and Activities

Solutions · 12 questions

Directions (Questions 1–12): These are the Questions and activities at the end of the chapter (pages 210–213). Answer each in your own words using the points given.

QUESTION 1

An increase in income always leads to a rise in demand for goods. Defend or refute, giving reasons for the same.

ANSWER

Refute. Income is only one determinant of demand. A rise in income generally raises the quantity demanded of several goods, but not always for every good.

a **Reasons**

Reason	Explanation
Tastes and preferences	Srivalli likes mangoes and will not buy oranges instead, whatever her income
Higher-quality choices	With more income people may choose higher-quality products instead of buying more of the same good
Diminishing marginal utility	Once enough of a good is consumed, extra units add little utility, so demand does not keep rising
Other determinants	Seasonality, prices of related goods and future price expectations can raise or lower demand even if income rises

Therefore, the statement is refuted: a rise in income generally, but not always, increases demand.

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QUESTION 2

If petrol prices double, what happens to

a. Demand for diesel cars
b. Demand for electric cars
c. Demand for car accessories
d. Demand for public transport

ANSWER

When petrol becomes costlier, goods that replace petrol cars become more attractive (substitutes), while goods used along with petrol cars (complements) are demanded less.

a Effects

Part	Effect on demand	Reason
a. Diesel cars	Rises	Diesel cars are a substitute for petrol cars; buyers shift to the cheaper-to-run alternative
b. Electric cars	Rises	Electric cars are also a substitute for petrol cars
c. Car accessories	Falls (likely)	Complementary to cars: fewer petrol cars are bought and used, so fewer accessories are demanded (like popcorn when movie tickets get costlier)
d. Public transport	Rises	A substitute for travelling in private petrol vehicles

Therefore, demand for diesel cars, electric cars and public transport rises, while demand for car accessories is likely to fall.

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QUESTION 3

A farmer traditionally irrigates fields manually (labour-intensive). He installs drip irrigation (a technology upgrade) that reduces water use by 40 per cent and increases yield by 30 per cent. How does this affect

a. His cost of production

b. His willingness to supply at different prices

c. The overall market supply if many farmers adopt this technology

ANSWER

Improvement in technology reduces the cost of production, which allows producers to produce and supply more.

a His cost of production

It falls per unit of output. Taking 100 units of water and 100 units of output before: after the change water used = 60 units (40% less) and output = 130 units (30% more). Water per unit of output = 60 ÷ 130 ≈ 0.46, about 54% less. (The cost of installing the system is an investment that is spread over larger output.)

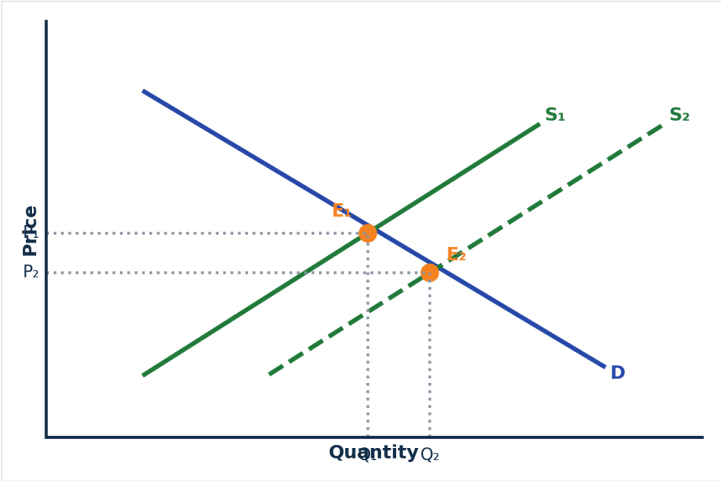
b Willingness to supply at different prices

It increases. Lower cost makes production profitable even at lower prices, so he is willing to supply more at every price; his individual supply curve shifts to the right.

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c Overall market supply

Market supply is the sum of individual supplies, so when many farmers adopt the technology market supply increases (the curve shifts right). If demand stays the same, supply exceeds demand at the old price, so the price falls and a larger quantity is bought.



Rightward shift of supply from S_1 to S_2: equilibrium moves from E_1 to E_2 (lower price, larger quantity)

Therefore, drip irrigation lowers the cost of production, raises willingness to supply and increases market supply.

QUESTION 4

During online festival sales, the prices of many products are very low. Use the concept of demand and supply to explain why the sellers sell at such a low price. What happens to the equilibrium when the price is lowered? Does this benefit only consumers or sellers as well? Explain.

ANSWER

Festival demand is high and many sellers compete. Lower prices raise the quantity demanded (Law of Demand), so sellers can sell much more.

a Why sellers sell at low prices

- Quantity demanded rises when the price falls, so a lower price attracts many more buyers.
- Buyers often postpone purchases expecting festival discounts, so sellers must offer them to win this demand.
- More sellers and more production mean greater supply and competition, which pushes prices down.

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- Revenue (total money earned from sales) can rise even if the price per unit falls, because more units are sold.

b What happens to the equilibrium

At a price below the old equilibrium, quantity demanded exceeds the quantity supplied. Sellers respond by supplying more, and the market settles at a new equilibrium with a lower price and a larger quantity bought and sold.

c Who benefits?

- **Consumers** pay less.
- **Sellers** also gain by selling more units, clearing stock and attracting new customers. The gain holds as long as the price still covers their costs.

Therefore, low festival prices benefit both consumers and sellers, and the equilibrium moves to a lower price and a larger quantity.

QUESTION 5

Suppose the government sets a maximum sale price for an essential vaccine below the market-driven price. What is likely to happen? Choose from the options below and elucidate your point.

a. Surplus b. Shortage
c. No effect d. Fall in demand

ANSWER

Correct option: (b) Shortage.

a Explanation

- A maximum price below the market price makes the quantity demanded greater than the quantity supplied (like ₹40 in Table 9.3, where Qs = 6 kg and Qd = 38 kg).
- Producers may lose motivation to supply at the lower price (compare the wheat example: maximum price of ₹20 against a market price of ₹30), so production falls and shortages arise.
- Shortages can encourage hoarding and black marketing, as seen with sanitisers.

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b Why the other options are wrong

Option	Reason
a. Surplus	A surplus arises when the price is above the equilibrium price
c. No effect	A cap below the market price changes the quantity demanded and supplied
d. Fall in demand	A lower price raises the quantity demanded, it does not reduce it

Therefore, a maximum price set below the market price is likely to cause a shortage.

QUESTION 6

The government levies higher taxes on products such as tobacco and alcohol to promote healthier choices among citizens. Can you find out other goods where price controls have been set in place? What are the reasons for the same?

ANSWER

Price controls fix a maximum price (ceiling) or a minimum price (floor). Examples from the chapter are given; find more from newspapers or your local market.

a Goods and services with price controls

Good or service	Control	Reason
Essential medicines	Maximum price (ceiling)	To prevent overcharging, so essentials remain accessible to all
Sanitisers (COVID-19)	Maximum retail price ₹100 for 200 ml, under the Essential Commodities Act, 1955	To stop stockouts, hoarding, black marketing and sharp price rises
Labour (wages)	Minimum wage (floor)	To ensure workers earn enough for their hard work
Monopoly goods or services	Prices and quantity kept in check	To protect consumers from high prices and poor quality

Therefore, price controls on essentials and wages are set to protect consumers and workers.

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QUESTION 7

Can excessive government regulation hurt markets? Explain with suitable examples.

ANSWER

Yes. Government regulations are required when markets are inefficient, but excessive intervention can have adverse effects.

a Adverse effects with examples

Effect	Example from the chapter
Price distortions and reduced producer incentives	Maximum wheat price of ₹20 per kg against a market price of ₹30: farmers receive ₹10 (one-third) less than in a free market, which may reduce production and cause shortages
Compliance burdens	A small restaurant may need many permissions (food safety, fire safety, pollution control, local clearances); the time and cost can discourage small entrepreneurs
Discourages innovation and entrepreneurship	Farmers will not invest in better seeds or irrigation if they cannot earn adequate returns, reducing long-term productivity and output

Therefore, excessive regulation can reduce supply, hamper ease of doing business and discourage innovation, so it must be implemented carefully.

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QUESTION 8

In the table below, different prices of guava are given.

a. Think and write how much guava you will buy at each price.

b. Ask the same question to three of your friends and fill in the table.

c. Also make a graph for each one of you and one final graph for the total quantity.

Price	You	Friend 1	Friend 2	Friend 3	Total
₹100/kg					
₹80/kg					
₹50/kg					
₹20/kg					

ANSWER

This is an activity. Model values are shown below; fill in your own and your friends' choices the same way.

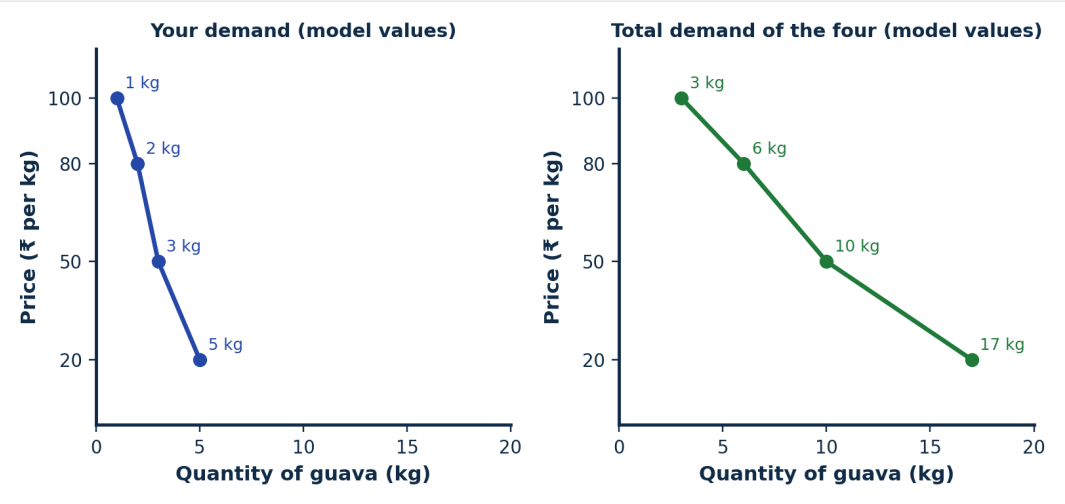
a Filled table (model values)

Price	You	Friend 1	Friend 2	Friend 3	Total
₹100/kg	1 kg	0 kg	1 kg	1 kg	3 kg
₹80/kg	2 kg	1 kg	1 kg	2 kg	6 kg
₹50/kg	3 kg	2 kg	2 kg	3 kg	10 kg
₹20/kg	5 kg	4 kg	3 kg	5 kg	17 kg

NCERT ARCHIVE

b Graphs

Plot price on the Y-axis and quantity on the X-axis. Total = You + Friend 1 + Friend 2 + Friend 3 (for ₹100: 1 + 0 + 1 + 1 = 3). Draw one graph for each person in the same way; the total graph is flatter. Graphs for you and the total are shown.



Model demand graphs: your demand and total demand for guava

Therefore, each person's graph slopes downward (Law of Demand), and adding all the demands gives the total demand graph.

QUESTION 9

Visit the nearby vegetable market and try to find answers to the following questions.

a. Who decides the prices of different vegetables in the vegetable market?

b. Sometimes the prices of a few vegetables is too high, and sometimes too low. Why is this?

c. The price of tomatoes is high in the morning and eventually gets lower by the evening. Have you ever noticed this? Comment.

ANSWER

This is a field activity. Model answers based on the chapter are given; confirm them by talking to sellers and buyers.

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a Who decides the prices

Prices are determined by the interaction between buyers and sellers, that is, by demand and supply. Sellers set prices, and these adjust when they are too high or too low for buyers.

b Why prices are sometimes too high or too low

- When supply is less than demand, prices rise; when supply exceeds demand, prices fall.
- Supply changes with the season, weather and technology (such as cold storage); demand changes with festivals, tastes and seasons. Onion prices, for example, seem to change every few months.

c Tomato prices in the morning and evening

Tomatoes are perishable. Early in the day fresh stock is limited and buyers are many, so the price is high. By evening the unsold stock must be sold and demand has fallen, so sellers lower the price. (Observe in your own market.)

Therefore, vegetable prices are decided by buyers and sellers through demand and supply, and change as these change.

QUESTION 10

Categorise the following combination of goods into substitute goods and complementary goods.

a. Movie ticket in the cinema hall and popcorn
b. Eraser and pencil
c. Laptop and computer
d. Air Conditioner and cooler
e. Notebook and pen
f. Apple and banana
g. Mobile and earphones

ANSWER

Substitute goods can replace each other; complementary goods are used together.

a Categorisation

Pair	Category	Reason
a. Movie ticket and popcorn	Complementary	Popcorn is bought along with the film; costlier tickets reduce popcorn demand

NCERT ARCHIVE

Pair	Category	Reason
b. Eraser and pencil	Complementary	Used together for writing
c. Laptop and computer	Substitute	Either can be used for the same computing work
d. Air conditioner and cooler	Substitute	Either can be used to cool a room
e. Notebook and pen	Complementary	Used together for writing
f. Apple and banana	Substitute	One fruit can replace the other
g. Mobile and earphones	Complementary	Used together (an example given in the chapter)

Therefore, substitutes: c, d, f; complementary goods: a, b, e, g.

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QUESTION 11

Fig. 9.8 shows the demand curve DD’ and Supply curve SS’. Based on the figure, answer the following questions:

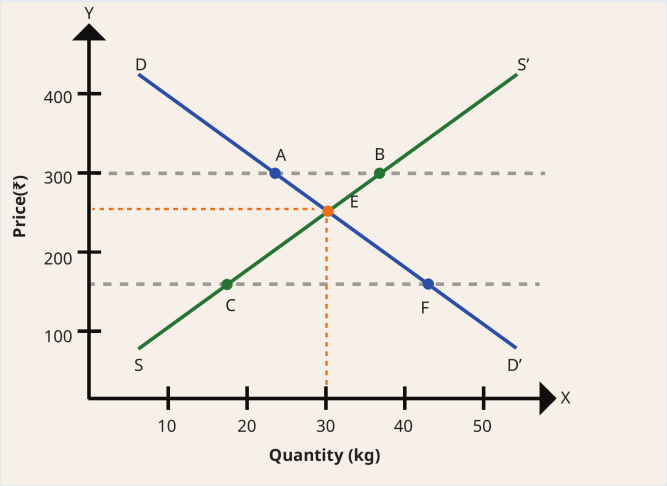
a. What does point E represent in this market?

b. What is the equilibrium price and equilibrium quantity at point E?

c. Point A lies on DD’. Point B lies on SS’. What do the points A and B indicate about demand and supply? What does the gap between A and B (both on the upper dashed price line) represent?

d. Point F lies on DD’. Point C lies on SS’. What do the points F and C indicate about demand and supply? What does the gap between C and F (both on the lower dashed price line) represent?

e. If the price stays at the lower dashed line, what could happen next in a free market?



ANSWER

Values are read from Fig. 9.8 and are approximate: the upper dashed line is at ₹300 and the lower dashed line is at about ₹160.

a Answers

Part	Answer
a	Point E is the market equilibrium, where the demand curve DD’ meets the supply curve SS’ and quantity demanded equals quantity supplied
b	Equilibrium price ≈ ₹250 (between ₹200 and ₹300, on the orange dotted line) and equilibrium quantity = 30 kg

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Part	Answer
c	At ₹300: A is the quantity demanded (about 24 kg) and B is the quantity supplied (about 37 kg). The gap AB (about 13 kg) is **excess supply (surplus)**, because Qs > Qd at a price above equilibrium
d	At about ₹160: F is the quantity demanded (about 43 kg) and C is the quantity supplied (about 18 kg). The gap CF (about 25 kg) is **excess demand (shortage)**, because Qd > Qs at a price below equilibrium
e	There is a shortage: buyers compete for limited goods and sellers can charge more, so the price rises. As it rises, quantity demanded falls and quantity supplied increases, until the market returns to equilibrium (about ₹250, 30 kg)

Therefore, a price above equilibrium creates a surplus and a price below equilibrium creates a shortage; the free market moves back to point E.

QUESTION 12

Draw a market equilibrium graph using the following demand schedule.

Price (₹)	10	20	30	40	50
Q.D. (kg)	5	10	15	20	25
Q.S. (kg)	25	20	15	10	5

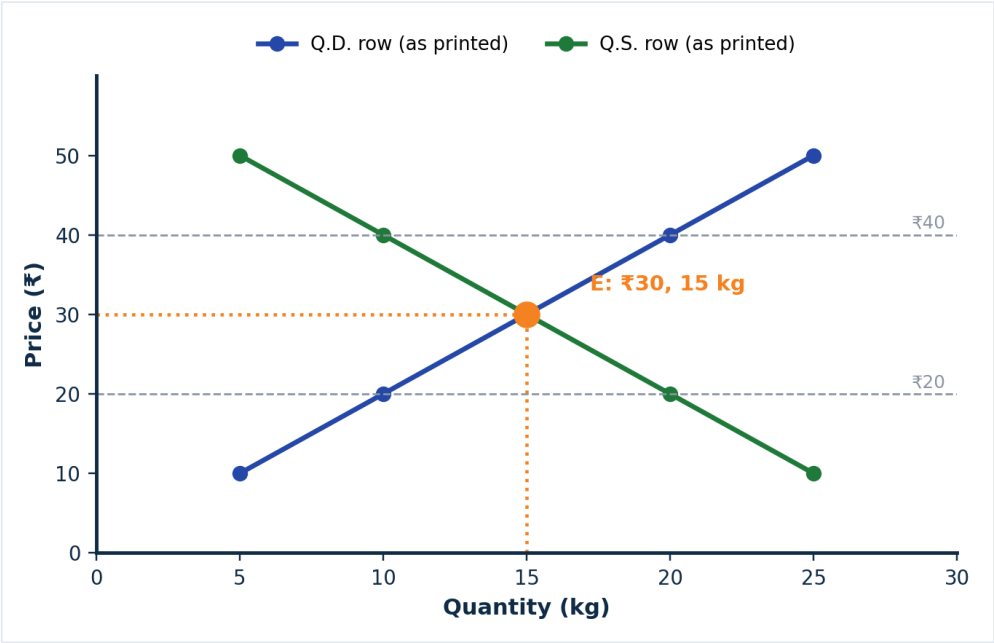
a. Plot the demand and supply curve using the above data.
b. Identify the equilibrium price and quantity.
c. Observe the above data and analyse what happens if the price is set at ₹20 or ₹40.

ANSWER

Plot price on the Y-axis and quantity on the X-axis, then join the Q.D. points and the Q.S. points. They cross where Q.D. = Q.S.

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a Graph (data as printed)



Market equilibrium from the given schedule: E at ₹30 and 15 kg

b Equilibrium

Q.D. = Q.S. = 15 kg at ₹30. **Equilibrium price = ₹30 and equilibrium quantity = 15 kg.**

c Price set at ₹20 or ₹40

Price (₹)	Q.D. (kg)	Q.S. (kg)	Gap	Result as printed
20	10	20	20 − 10 = 10 kg	Q.S. > Q.D.: excess supply
40	20	10	20 − 10 = 10 kg	Q.D. > Q.S.: excess demand

Note: in the printed schedule Q.D. rises and Q.S. falls as the price rises, the reverse of the Laws of Demand and Supply, so the two row labels look interchanged. If they are read in line with the laws (demand falling and supply rising with price), the equilibrium is the same (₹30, 15 kg), but at ₹20 there is excess demand of 10 kg (price rises) and at ₹40 excess supply of 10 kg (price falls).

Therefore, equilibrium is at ₹30 and 15 kg; at ₹20 and ₹40 the market is out of balance by 10 kg, and the price moves back toward ₹30 when demand and supply follow the laws.

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