

CLASS 9 SOCIAL SCIENCE – PART 1

Chapter 9: The Price Puzzle: What Drives the Market

Competency-Based Questions and Answers (CBQs)

1. Demand and Purchasing Power

A school canteen sells fruit cups. A student likes fruit cups but has very little money and cannot afford one at the listed price. Another student has enough money and buys two fruit cups.

- Which student's desire is supported by purchasing power and becomes demand at the stated price?
- Explain why wanting a product alone is not sufficient to constitute demand.
- State the Law of Demand, assuming other factors remain constant.

2. Individual Demand Schedule

The textbook gives Srivalli's demand for mangoes as follows: at ₹150 per kg she buys 1 kg; at ₹100 per kg she buys 2 kg; at ₹50 per kg she buys 3 kg.

- What happens to Srivalli's quantity demanded when the price falls from ₹150 to ₹50 per kg?
- What relationship between price and quantity demanded does this illustrate?
- Name the graph used to represent the demand schedule.

3. Calculating Market Demand

The chapter gives the following quantities demanded by three consumers: at ₹150 per kg, Srivalli buys 1 kg, Alex 2 kg and Israt 3 kg; at ₹100, they buy 2 kg, 4 kg and 6 kg; at ₹50, they buy 3 kg, 6 kg and 9 kg.

- Calculate market demand at ₹150 per kg.
- Calculate market demand at ₹100 per kg.
- Calculate market demand at ₹50 per kg.

4. Substitute and Complementary Goods

A family buys tea and coffee as alternative drinks. It also uses a smartphone with earphones. The price of coffee rises, while the price of earphones remains unchanged.

- Are tea and coffee substitutes or complementary goods?
- Are smartphones and earphones substitutes or complementary goods in the chapter's example?
- If coffee becomes more expensive, what may happen to demand for tea, other factors remaining constant?

5. Seasonality and Expectations

A shop sells sweaters and festive sweets. Sweater sales rise in cold weather. Some consumers hear that mango prices may rise next week and decide to buy mangoes sooner.

- a) Identify one factor that changes demand for sweaters.
- b) Which factor may be affecting present mango demand?
- c) Explain why expectations about future prices can affect current demand.

6. Diminishing Marginal Utility

A student eats slices of pizza one after another. The first slice gives great satisfaction, but each additional slice gives less extra satisfaction than the previous one.

- a) Name the concept illustrated.
- b) What happens to the additional satisfaction from successive slices?
- c) How can this influence willingness to pay for additional slices?

7. Law of Supply

A mango seller is willing to offer 1 kg at ₹50 per kg, 2 kg at ₹100 and 3 kg at ₹150, assuming other factors remain constant.

- a) How much does the seller offer at ₹100 per kg?
- b) What relationship between price and quantity supplied does this example show?
- c) Give one reason why a higher price may encourage sellers to offer more.

8. Calculating Market Supply

The chapter's market supply schedule gives these quantities: at ₹50 per kg, sellers A, B and C supply 1, 3 and 2 kg; at ₹100 they supply 2, 4 and 6 kg; at ₹150 they supply 3, 7 and 8 kg.

- a) Calculate market supply at ₹50 per kg.
- b) Calculate market supply at ₹100 per kg.
- c) Calculate market supply at ₹150 per kg.

9. Finding Market Equilibrium

In the chapter's Table 9.3, at ₹40 per kg, quantity demanded is 38 kg and quantity supplied is 6 kg; at ₹100, both are 12 kg; at ₹150, quantity demanded is 8 kg and quantity supplied is 43 kg.

- a) At ₹40, calculate excess demand.
- b) Identify the equilibrium price and quantity from the table.
- c) At ₹150, calculate excess supply.

10. Interpreting Shortage and Surplus

At one price, buyers want 30 kg of mangoes but sellers offer only 12 kg. At a different price, sellers offer 40 kg but buyers want only 15 kg.

- a) In the first situation, is there excess demand or excess supply? Calculate it.
- b) In the second situation, is there excess demand or excess supply? Calculate it.
- c) What pressure can excess demand and excess supply place on prices, respectively?

11. Technology and Supply

A farmer adopts drip irrigation and weather sensors. Another trader installs cold storage so mangoes can be transported to distant markets with less spoilage.

- a) Name the factor that may increase supply in these situations.
- b) How can drip irrigation or weather sensors help production?
- c) How can cold storage affect the quantity supplied to distant markets?

12. Dynamic Pricing in Hotels

The chapter describes a Goa hotel charging ₹1,500 on an off-season weekday in July, ₹8,000 on a tourist-season Saturday in December and ₹25,000 on New Year's Eve.

- a) What is the lowest tariff among these three examples?
- b) What is the tariff on New Year's Eve?
- c) Name two factors that may explain why the hotel changes its prices.

13. Price Ceiling and Price Floor

The government sets a maximum price for an essential product to protect consumers. In another situation, it establishes a minimum wage for workers.

- a) What is a price ceiling?
- b) What is a price floor?
- c) Identify which policy instrument applies to the minimum wage example.

14. Monopoly and Regulation

In a market, one producer supplies a product for which consumers have no close substitute. The producer can influence the price and amount supplied.

- a) Identify the market structure.
- b) State one possible problem associated with monopoly described in the chapter.
- c) Why may government regulation be considered?

15. Public Goods and Government Intervention

A town maintains roads, bridges, public parks, streetlighting, sanitation and drainage systems. The services benefit many people in the community.

- a) Name two public goods or services from the situation.
- b) Why might private companies not supply some public goods adequately?
- c) State one reason public provision of these services can be important.

16. Government Intervention: Benefits and Limitations

A government sets a price below the market level. Producers receive less than they otherwise might and some reduce production. Businesses also face many licences and procedures.

- a) State one possible market effect of a price fixed below the market level.
- b) How can extensive licences and procedures affect businesses?
- c) Name one further limitation of excessive government intervention mentioned in the chapter.

17. COVID-19 and Changing Prices

The chapter explains that demand for face masks rose sharply during the COVID-19 pandemic in 2020, while supply could not immediately keep pace. Later, supply adjusted and demand declined.

- a) Why did prices rise when demand increased faster than supply could respond?
- b) What happened as supply adjusted and demand later declined, according to the chapter?
- c) What does this example show about real-world markets?

18. Numerical Reasoning: Compare Two Markets

Market A has quantity demanded of 24 kg and quantity supplied of 10 kg at a particular price. Market B has quantity demanded of 14 kg and quantity supplied of 29 kg.

- a) Calculate excess demand in Market A.
- b) Calculate excess supply in Market B.
- c) State the likely direction of price pressure in each market.

Suggested Answers

1. Demand and Purchasing Power

- a) **Which student's desire is supported by purchasing power and becomes demand at the stated price?** The second student's willingness and ability to pay is reflected in the purchase; demand means willingness and ability to buy at a particular price.
- b) **Explain why wanting a product alone is not sufficient to constitute demand.** A desire alone is not demand unless the buyer is also able to pay for the product.
- c) **State the Law of Demand, assuming other factors remain constant.** Other factors remaining constant, when price rises, quantity demanded generally falls; when price falls, quantity demanded generally rises.

2. Individual Demand Schedule

- a) **What happens to Srivalli's quantity demanded when the price falls from ₹150 to ₹50 per kg?** Her quantity demanded rises from 1 kg to 3 kg.
- b) **What relationship between price and quantity demanded does this illustrate?** It illustrates the inverse relationship described by the Law of Demand, other factors remaining constant.
- c) **Name the graph used to represent the demand schedule.** A demand curve.

3. Calculating Market Demand

- a) **Calculate market demand at ₹150 per kg.** $1 + 2 + 3 = 6$ kg.
- b) **Calculate market demand at ₹100 per kg.** $2 + 4 + 6 = 12$ kg.
- c) **Calculate market demand at ₹50 per kg.** $3 + 6 + 9 = 18$ kg.

4. Substitute and Complementary Goods

- a) **Are tea and coffee substitutes or complementary goods?** Tea and coffee are substitute goods because one can replace the other.
- b) **Are smartphones and earphones substitutes or complementary goods in the chapter's example?** Smartphones and earphones are complementary goods because they are generally used together.
- c) **If coffee becomes more expensive, what may happen to demand for tea, other factors remaining constant?** Demand for tea may rise as some consumers switch from coffee to tea.

5. Seasonality and Expectations

- a) **Identify one factor that changes demand for sweaters.** Seasonality or weather.
- b) **Which factor may be affecting present mango demand?** Expectations about future prices.
- c) **Explain why expectations about future prices can affect current demand.** If consumers expect prices to rise, they may buy sooner, increasing present demand; expectations of future discounts may cause some consumers to postpone purchases.

6. Diminishing Marginal Utility

- a) **Name the concept illustrated.** Diminishing marginal utility.

b) What happens to the additional satisfaction from successive slices? The additional utility or satisfaction from successive units declines.

c) How can this influence willingness to pay for additional slices? As the additional utility declines, willingness to pay for additional units may also decrease.

7. Law of Supply

a) How much does the seller offer at ₹100 per kg? 2 kg.

b) What relationship between price and quantity supplied does this example show? It shows the direct relationship described by the Law of Supply: a higher price generally corresponds to a higher quantity supplied, other factors constant.

c) Give one reason why a higher price may encourage sellers to offer more. A higher price may increase profitability and make supplying additional units more attractive.

8. Calculating Market Supply

a) Calculate market supply at ₹50 per kg. $1 + 3 + 2 = 6$ kg.

b) Calculate market supply at ₹100 per kg. $2 + 4 + 6 = 12$ kg.

c) Calculate market supply at ₹150 per kg. $3 + 7 + 8 = 18$ kg.

9. Finding Market Equilibrium

a) At ₹40, calculate excess demand. Excess demand = $38 - 6 = 32$ kg.

b) Identify the equilibrium price and quantity from the table. Equilibrium price = ₹100 per kg; equilibrium quantity = 12 kg, because quantity demanded equals quantity supplied.

c) At ₹150, calculate excess supply. Excess supply = $43 - 8 = 35$ kg.

10. Interpreting Shortage and Surplus

a) In the first situation, is there excess demand or excess supply? Calculate it. Excess demand = $30 - 12 = 18$ kg.

b) In the second situation, is there excess demand or excess supply? Calculate it. Excess supply = $40 - 15 = 25$ kg.

c) What pressure can excess demand and excess supply place on prices, respectively? Excess demand tends to place upward pressure on prices; excess supply tends to place downward pressure on prices.

11. Technology and Supply

a) Name the factor that may increase supply in these situations. Technology.

b) How can drip irrigation or weather sensors help production? They may improve resource use, help manage water and weather-related risks, and support more efficient production.

c) How can cold storage affect the quantity supplied to distant markets? Cold storage can reduce spoilage and help sellers supply mangoes to markets farther away.

12. Dynamic Pricing in Hotels

- a) What is the lowest tariff among these three examples?** ₹1,500.
- b) What is the tariff on New Year's Eve?** ₹25,000.
- c) Name two factors that may explain why the hotel changes its prices.** Seasonal demand, booking speed, cancellations, local events, weather, nearby hotel prices or past booking trends.

13. Price Ceiling and Price Floor

- a) What is a price ceiling?** A government-imposed maximum price that sellers may charge.
- b) What is a price floor?** A government-imposed minimum price.
- c) Identify which policy instrument applies to the minimum wage example.** A price floor. The chapter uses minimum wages as an example.

14. Monopoly and Regulation

- a) Identify the market structure.** Monopoly.
- b) State one possible problem associated with monopoly described in the chapter.** It may lead to higher prices, lower supply or poorer quality.
- c) Why may government regulation be considered?** Regulation may be used to protect consumers and prevent unfair or harmful market practices.

15. Public Goods and Government Intervention

- a) Name two public goods or services from the situation.** Any two: roads, bridges, public parks, streetlighting, sanitation or drainage systems.
- b) Why might private companies not supply some public goods adequately?** They may not generate direct profit, or people may benefit without contributing to the cost, so private providers may have insufficient incentive to supply them adequately.
- c) State one reason public provision of these services can be important.** Public provision can support social welfare, economic development and wider access to essential services.

16. Government Intervention: Benefits and Limitations

- a) State one possible market effect of a price fixed below the market level.** It may reduce producer incentives and lead to reduced supply or shortages.
- b) How can extensive licences and procedures affect businesses?** They may increase the time and cost of doing business, particularly for small enterprises.
- c) Name one further limitation of excessive government intervention mentioned in the chapter.** It may weaken incentives for innovation and entrepreneurship or distort prices.

17. COVID-19 and Changing Prices

- a) Why did prices rise when demand increased faster than supply could respond?** The rise in demand relative to available supply created upward pressure on prices.
- b) What happened as supply adjusted and demand later declined, according to the chapter?** Prices fell as supply adjusted and demand later declined.

c) What does this example show about real-world markets? Markets are dynamic: demand and supply conditions change, and prices adjust over time.

18. Numerical Reasoning: Compare Two Markets

a) Calculate excess demand in Market A. Excess demand = $24 - 10 = 14$ kg.

b) Calculate excess supply in Market B. Excess supply = $29 - 14 = 15$ kg.

c) State the likely direction of price pressure in each market. Market A: upward pressure on price.
Market B: downward pressure on price.