

Cambridge IGCSE/O-Level Economics

(Code: 0455/2281)

Section 02

The allocation of resources



Chapter 05

2.5 microeconomics and macroeconomics

The difference between microeconomics and macroeconomics

Economics is divided into **microeconomics** and **macroeconomics**. As their names suggest, microeconomics is concerned with the small scale and macroeconomics with the large scale.

microeconomics: the study of the behaviour and decisions of households and firms, and the performance of individual **markets**.

Market: an arrangement which brings buyers into contact with sellers.

Macroeconomics: the study of the whole economy.

The connection between macroeconomics and microeconomics

Microeconomics concepts are applied in macroeconomics, examining demand for individual products, total demand for goods and services, and the reasons behind product and economy price changes. Microeconomic decisions and interactions influence macroeconomics, influencing changes in the microeconomy and vice versa.

Decision makers in microeconomics and macroeconomics

The decision-makers in microeconomics and macroeconomics are sometimes called economic agents.

Economic agents are those who undertake economic activities and make economic decisions. The sector comprises households, firms, and government, with households being consumers, firms producing goods and services, and the government regulating the **private sector**. The private sector can be described as firms owned by shareholders and individuals.

The aims of decision-makers

The sector focuses on consumer needs like low prices, quality products, good working conditions, high pay, and safe money returns. Governments aim for a strong economy, macroeconomy objectives, and individual market performance through taxation.

Chapter 06

2.6 The role of markets in allocating resources

The three key allocation decisions

All economies are changing, and they all must answer three fundamental economic questions:

- What to produce?
- How to produce it?
- Who is to receive the products produced?

The economic problem of unlimited wants exceeding finite resources necessitates resource allocation, production, and distribution decisions. The answers to the above questions differ in different **economic systems**. The **economic system** is the institutions, organizations and mechanisms that influence economic behaviour and determine the allocation of resources.

Different economic systems

There are three main economic systems.

1. **Planned economic system**: an economic system where the government makes the crucial decisions, land and capital are state-owned and resources are allocated by **directives**. Directives are state instructions given to state-owned enterprises.
2. **Mixed economic system**: an economy in which both the private and public sectors play an important role.
3. **Market economic system**: an economic system where consumers determine what is produced, resources are allocated by the price mechanism and land and capital are privately owned.

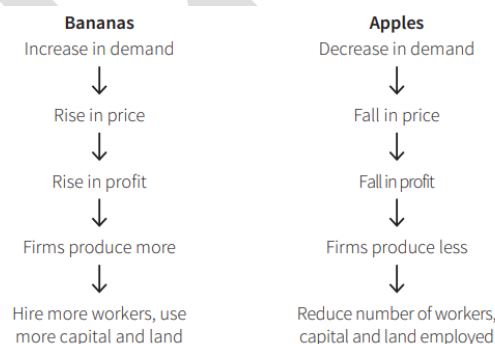
A market economic system

Price mechanism: the way the decisions made by households and firms interact to decide the allocation of resources. In a market economic system. Land and capital are privately owned. Private sector firms decide how to produce the products consumers want to buy **Capital-intensive**, is the use of a high proportion of capital relative to labour. and **labour-intensive** is the use of a high proportion of labour relative to capital.

The role of the price mechanism

In a market economic system, resources move automatically because of price changes.

Market equilibrium is a state where producers respond to market changes, Market equilibrium moves to **market disequilibrium** and back to market equilibrium again.



Chapter 07

2.7 demand

Definition of demand

When economists discuss **demand**, they are discussing effective demand. Demand is the willingness and ability to buy a product.

Demand and Price

Demand and price are inversely related, with demand rising as the price falls and falling as the price rises, as higher prices lead to fewer people affording and switching to rival products.

Individual and Market Demand

Economists study individual and, more commonly, **market demand**. As its name suggests individual demand is the amount of a product an individual would be willing and able to buy, at different prices. Aggregation is the addition of individual components to arrive at a total amount.

A demand schedule.

A demand schedule lists the different quantities demanded. Of a product, at different prices over a particular period, Table 7.1 shows a demanding schedule for tickets on trains from Station X to Station Y.

Price (\$)	Quantity demanded
50	2200
45	2500
40	3000
35	3800
30	5000
25	7000

Table 7.1: Daily demand for train tickets from Station X to Station Y.

A demand curve.

The information from a demand curve can be plotted on a diagram. Price is measured on the vertical axis (the line going up) and quantity demanded on the horizontal axis (the line going across). Figure 7.1 shows the information in Table 7.1 as a diagram.

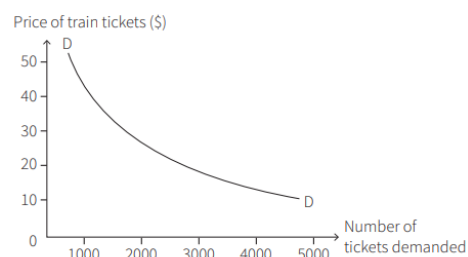


Fig. 7.1: Daily demand for train tickets from Station X to Station Y

This demand curve and the demand schedule on which it is based do not show the demand over the full range of prices. It is possible to do this. Figure 7.2 illustrates such a curve.

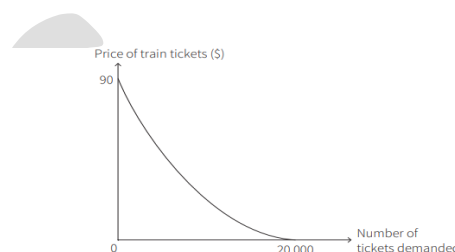


Fig. 7.2: A demand curve over the full range of prices

Demand curves show the price at which people would stop buying tickets, and the number of tickets they would want if provided free of charge. Economists often draw demand curves as straight lines to illustrate the relationship between demand and price and the effect of price changes on demand.



Fig. 7.3: A straight line demand curve

The effect of a change in price on demand

As noted earlier, a fall in the price of a product is likely to lead to a rise in demand for it. Economists refer to this as an extension in demand, expansion in demand or an increase in the quantity demanded. Seeing the words 'an extension in demand', 'expansion in demand' or 'an increase in the quantity demanded' will tell an economist that the cause of the change in demand is a change in the price of the product itself. Such a change can be illustrated on a demand curve, as shown in Figure 7.4.

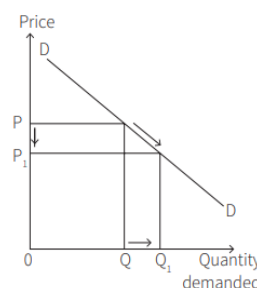


Fig. 7.4: An extension in demand

The diagram shows that a fall in price from P to P_1 has caused the demand to extend from Q to Q_1 . In contrast, a price rise will cause a contraction in demand which can also be referred to as a decrease in quantity demanded. **Contraction in demand** is a fall in the quantity demanded caused by a rise in the price of the product itself.

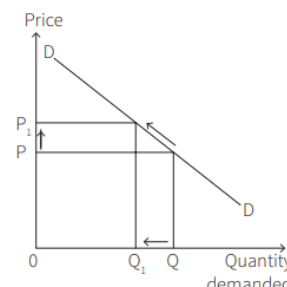


Fig. 7.5: A contraction in demand

Conditions of Demand

- Price is not the only influence on demand. **Changes in demand** are shifts in the demand curve.
- An **increase in demand** is a rise in demand at any given price, causing the demand curve to shift to the right.

Price per ice cream \$	Quantities demanded per day	
	Original demand	New demand
5	2000	4000
4	3000	5000
3	4000	6000
2	5000	7000
1	6000	8000

Table 7.2: Demand for ice cream

On a diagram, an increase in demand is shown by a shift to the right of the demand curve. Figure 7.6 shows that at any given price, a larger quantity is demanded. At a price of \$2,

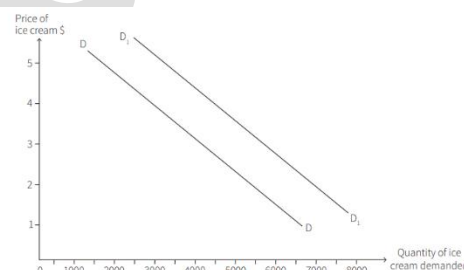


Fig. 7.6: An increase in demand

Causes of changes in demand

Among the factors that can cause consumers to demand different quantities of a product, even if the price has not changed, are changes in income, changes in the price of related products, advertising campaigns, changes in population, and changes in taste and fashion.

Changes in income

An increase in income raises consumers' purchasing power. For most of the products, this results in an increase in demand. So, **Normal goods** are the products whose demand increases when income increases and decreases when income falls. And the **inferior goods** are the products whose demand decreases when income increases and increases when income falls.

Changes in the price of related products

An increase in demand can be caused by a rise in the price of a **substitute** product. If the price of holidays in Morocco rises, demand for holidays in Mauritius may increase. Demand will also increase if the price of a **complement**. A **substitute** is a product that can be used in place of another, and the **Complement** is a product that is used together with another product.

Advertising campaigns

A successful advertising campaign will increase demand for a product. It may bring the product to the notice of some new consumers and may encourage some existing consumers to purchase more quantities of the product.

Changes in population

The **birth rate** and **age composition** of a population can significantly impact demand, with an increasing population leading to increased demand for products like wheelchairs and toys.

Changes in taste and fashion

Changes in taste and fashion significantly impact products like food, clothes, and entertainment. Vegetarianism, health reports, designer trainers, and football popularity in Asia and Africa increase demand for these items.

Other factors

Factors such as weather changes, future price expectations, and special events can impact product demand. Weather changes can affect ice cream demand, umbrellas, soft drinks, and clothing. Expectations about price rises can also influence current demand. Special events like the 2016 Summer Olympic Games can also impact demand.

Chapter 8

2.8 supply

Definition of supply

Supply: the willingness and ability to sell a product.

Supply and price.

Supply is directly related to price, with higher prices boosting supply as firms earn higher profits and cover production costs.

The individual and market supply

Individual supply is the supply of one plant/firm, whereas market supply is the total supply of a product supplied by all the firms in the industry. Market supply is calculated in a similar way to **market demand**.

A supply schedule.

A supply schedule records the different quantities supplied at different prices. Table 8.1 shows a supply schedule for train tickets from Station X to Station Y.

Price (\$)	Quantity supplied
50	6000
45	5000
40	4300
35	3800
30	3600
25	3500

Table 8.1: Daily supply of train tickets from Station X to Station Y

From this information, a supply curve can be plotted as shown in Figure 8.1

The effect of a change in price on supply.

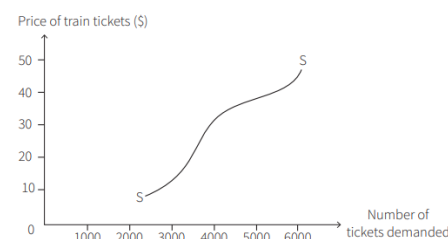


Fig. 8.1: Daily supply of train tickets from Station X to Station Y

extension in supply: a rise in the quantity supplied caused by a rise in the price of the product itself.

Contraction in supply: a fall in the quantity supplied caused by a fall in the price of the product itself.

Conditions of supply

Change in supply: changes in supply conditions cause shifts in the supply curve.

Price per tonne (rupee)	Supply in previous season (millions of tonnes)	Supply in current season (millions of tonnes)
1000	110	130
900	100	120
800	90	100
700	80	90
600	70	80
500	60	70

Table 8.2: Rice production

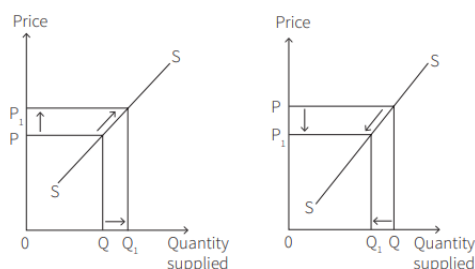


Fig. 8.2: (a) An extension in supply

(b) A contraction in supply

shifts in the supply curve.

While a change in the price of the product itself causes a movement along the supply curve, a change in supply conditions causes the supply curve to shift. **Increase in supply:** a rise in supply at any given price, causing the supply curve to shift to the right.

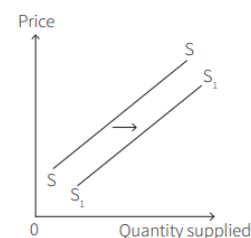


Fig. 8.3: An increase in supply

Decrease in supply: a fall in supply at any given price, causing the supply curve to shift to the left.

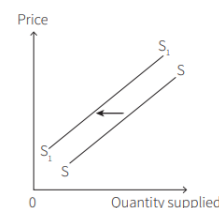


Fig. 8.4: A decrease in supply

Causes of changes in supply

Changes in supply are influenced by production costs, technological advancements, taxes, subsidies, weather conditions, livestock health, product prices, disasters, wars, new discoveries, and depletion.

Changes in the costs of production

Increased production costs lead to suppliers charging higher prices, such as \$50 per unit for four units at \$200, or \$70 per unit for four units at \$280.

The two basic reasons for a change in the costs of production are,

- A change in the price of any of the factors of production.
- A change in their productivity.

An increase in the wages paid to workers by itself would raise the costs of production and, therefore, cause a decrease in supply. So, the **Unit cost** is the average cost of production. It is found by dividing total cost by output.

Improvements in technology

This means advances in the quality of capital goods and methods of production.

Taxes

Direct taxes: taxes on the income and wealth of individuals and firms.

Indirect taxes: taxes on goods and services.

Nevertheless, the firms themselves are largely responsible for passing on the revenue from the **tax** to the government.

Subsidies

Subsidies mean a payment by a government to encourage the production or consumption of a product. As a result, the granting of a subsidy will cause an increase in supply whilst the removal of a subsidy will cause a decrease in supply.

Weather conditions and health of livestock and crops

Weather conditions, livestock health, and disease outbreaks all impact agricultural products. Good weather during harvest increases crop supply, while severe weather can damage crops and reduce supply. Disease outbreaks can also affect livestock and crop health.

Prices of other products

Firms produce a range of products, and if one product becomes popular, its price rises, extending supply. To produce more, firms may divert resources from other products, resulting in less supply at each price. Products can also be jointly supplied, where one product is automatically produced when another is produced..

Disasters and wars

Natural disasters like the 2011 earthquake and tsunami in Japan severely reduced the supply of various products due to extensive damage and worker deaths.

Discoveries and depletions of commodities

Discoveries of commodities like coal, gold, and oil impact their supply, with the oil supply increasing and the coal supply decreasing due to mine exhaustion.

Multiple choice questions

1) Households' decision to buy less rice reduced the profit of rice farmers. Which branch of economics covers these two changes?

	Households' decision	Rice farmers' profits
A	Microeconomics	Microeconomics
B	Microeconomics	Macroeconomics
C	Macroeconomics	Macroeconomics
D	Macroeconomics	Microeconomics

2) Who influences the total output of the Egyptian economy?

	Egyptian households	Egyptian firms	The Egyptian government
A	No	No	Yes
B	No	Yes	Yes
C	Yes	Yes	No
D	Yes	Yes	Yes

3) How are resources allocated in a market economy?

- A) By directives
- B) By the price mechanism
- C) By directives or the price mechanism
- D) By directives and the price mechanism

4) What is meant by market forces?

- A) The interaction of demand and supply
- B) The interaction of firms and the government
- C) The power of producers
- D) The power of the state

5) What is measured on the vertical axis of a demand diagram?

- A) Cost
- B) Price
- C) Quantity demanded
- D) Wants

6) What happens to people's willingness and ability to buy a product when its price falls?

- | | |
|--------------|-----------|
| Willingness | Ability |
| A) increases | increases |
| B) increases | decreases |
| C) decreases | decreases |
| D) decreases | Increases |

7) An increase in demand is represented by?

- A) A movement down the demand curve
- B) A movement up the demand curve
- C) A shift to the left of the demand curve
- D) A shift to the right of the demand curve

8) The price of a product rises. What will happen to the demand for its complement?

- A) It will contract.
- B) It will extend
- C) It will decrease
- D) It will increase

9) What is the relationship between demand and price and the relationship between supply and price?

Demand and price Supply and price.

- A) directly related directly related
- B) directly related inversely related
- C) inversely related directly related
- D) inversely related inversely related

10) What does a market supply curve show?

- A) The proportion of total output produced by different firms in the industry
- B) Proportion of total output sold
- C) The relationship between the total quantity supplied and demand for the product
- D) The relationship between the total quantity supplied and the price of the product

11) How would an increase in supply be illustrated?

- A) A movement up the supply curve
- B) A movement down the supply curve
- C) A shift to the left of the supply curve
- D) A shift to the right of the supply curve

12) What would cause an increase in the supply of milk?

- A) An increase in the price of cattle feed
- B) An increase in wages paid to farm workers
- C) The introduction of a subsidy to cattle farmers
- D) The outbreak of a disease affecting cows

Four-part question

- A) Define microeconomics. (2)
- B) Explain whether decisions in microeconomics involve an opportunity cost. (4)

Four-part question

- A) Identify two key resource allocation decisions. (2)
- B) Explain the difference between market equilibrium and market disequilibrium. (4)
- C) Analyse the functions of the price mechanism. (6)

Four-part question

- A) Define market demand. (2)
- B) Explain the relationship between demand and a price change. (4)
- C) Analyse the effect of a rise in the price of tea on the demand for milk and the demand for coffee. (6)
- D) Discuss whether the demand for bicycles will rise in the future. (8)

Four-part question

- A) Define supply. (2)
- B) Explain why supply and price are positively related. (4)
- C) Analyse, using a supply diagram, the effect of an improvement in the quality of the training car workers receive on the supply of cars. (6)
- D) Discuss whether changes in demand or changes in supply have a larger influence on the market for tomatoes. (8)

0455/23/O/N/20

Changes in tobacco production and consumption can have both microeconomic and macroeconomic effects. Tobacco plants are grown in at least 124 countries with different levels of development. A higher proportion of the poor than the rich consume tobacco products. The market for cigarettes, produced using tobacco, is changing. Demand for cigarettes and some other demerit goods is declining in several countries.

- Define microeconomics. [2]

0455/22/M/J/20

Mali is a low-income and low-productivity country in Africa. Its government is using fiscal policy to reduce poverty. The country's main industries are agriculture and gold mining. In recent years, however, there have been some changes in its resource allocation. The country is developing its iron ore industry. Globally, the iron ore industry has experienced a significant number of mergers in recent years.

- State two key questions about how resources are allocated. [2]

0455/23/M/J/21

Global spending on the health sector, by both the private and public sectors, is the highest compared with all other sectors including education and defense. Investment in education and the health sector has resulted in new life-saving technology being introduced. However, demand for certain vaccinations has decreased over the years, shifting the demand curve of vaccinations to the left.

- Explain two causes of a shift of a product's demand curve to the left. [4]

0455/21/M/J/21

There is an area of rubbish, three times the size of France, floating in the Pacific Ocean called the Great Pacific Garbage Patch. It is made up of rubbish including old fishing nets, but most is plastic waste. It is forecast that, by 2050, there will be more plastic in the Pacific Ocean than fish. Several islands in the Pacific Ocean specialize in fishing. Greater pollution will increase the social cost of the fishing industry.

- Explain two causes of a shift to the right in the demand curve for fish. [4]

0455/22/O/N/20

The population of Hungary is the most obese in Europe. Hungarians eat fewer vegetables than most Europeans and more food types that may be demerit goods. In 2017, the Hungarian government introduced a tax on unhealthy food, known as the chips tax. The tax has had some success in moving demand to healthier foods. Some economists suggest that governments should use price controls as well as taxes to influence the food market.

- Explain the difference between an extension in demand and an increase in demand. [4]

0455/23/M/J/20

There is a high level of division of labor in the United Kingdom (UK) energy industry. Cold weather in early 2018 caused a very high demand for energy and a change in its price. This led to a temporary shortage of energy for firms and households in the UK. Part of the change in price may have been the result of UK energy firms abusing their monopoly power. This would be an example of market failure.

- Explain two influences, other than weather, that could affect the demand for a product. [4]

0455/21/M/J/22

Trade union membership is much higher in Sweden than in most countries. In 2019, 70% of Swedish workers were members of a trade union. More than 85% of Swedish workers are employed in the tertiary sector, compared with only 2% in the primary sector. Swedish workers spend their incomes on a variety of products some of which, e.g. sweets, are demerit goods. Sweden has the 7th highest per-head consumption of sweets in the world.

- Identify two influences on what products a person buys. [2]

0455/22/F/M/20

In 2017, the Brazilian paper industry was booming. Its total revenue increased, and it employed both more, and better quality, factors of production. Brazil's largest paper producer merged with an Indonesian paper-producing firm at the end of 2017. The performance of Brazil's coffee industry differed from its paper industry. Brazilian coffee experienced a fall in demand and a fall in total revenue.

- Discuss whether demand for coffee is likely to rise in the future. [8]

0455/22/M/J/18

In October 2015, the Chinese government switched from its one-child policy to a two-child policy partly because of the challenges caused by an ageing population. The birth rate was falling anyway due to rising female participation in the labour force, improvements in education, later marriages, and the rapidly rising price of housing.

- Explain why the price of housing may increase. [4]

0455/22/M/J/18

In the UK, bus journeys outside London have fallen by nearly 40% since 1980. This fall in demand has been largely due to a rise in bus fares, a rise in income and changes in the price and quality of substitutes. On some routes, there are monopolies operating and this lack of competition can push up the price.

- Define a substitute and give an example. [2]

0455/21/O/N/22

Medan is the third largest city in Indonesia by population. It is sometimes known as the city of a million shop-houses as many people start small firms at the street level of their homes. This has led to an increase in the market supply of industries such as cafes and clothes shops. Also, due to the growth in demand for food delivery, the unemployment rate has fallen. However, the mobility of labour is limited both within Medan and within Indonesia.

- Identify the difference between individual supply and market supply. [2]

0455/22/F/M/22

The economic problem means that countries must decide what to produce. Ghana uses much of its agricultural land to grow cocoa. Cocoa is sold to chocolate producers. The world's main chocolate producer in 2019 was a US firm with a 14% share of the global market. That firm was the largest seller of chocolate in the US and, if it merges, may become a monopoly.

- Analyse the causes of a shift to the right in the supply curve of chocolate. [6]

0455/21/O/N/18

Droughts in the Pacific Coast region of the US and regulations, in the form of limits on the number of salmon that can be caught in the wild, have reduced the supply of wild salmon. These limits were imposed to avoid market failure in the salmon market. However, the effect of this on the revenue of salmon producers is uncertain. In addition, producers of farmed salmon in the US states of Washington and Alaska have received subsidies from the US government.

- Define supply. [2]

0455/22/O/N/23

In 2020, Singapore experienced a decrease in both its population size and its labour force. 2020 was a year of great change in several Singaporean markets. Some moved from disequilibrium to equilibrium. Despite all these changes, Singapore managed to increase its exports of goods and services.

- Explain how a market moves from disequilibrium to equilibrium. [4]

0455/23/O/N/22

Washington State is the state which grows the most apples in the US. In 2019, apple production increased in Washington State, but the market was in disequilibrium. Apple farming is a labor-intensive industry because apples are picked by hand. The market for apples in the US is competitive.

- Define market disequilibrium. [2]

0455/21/O/N/23

A third of the world's ski resorts are in the Alps. Prices for holidays in the Alps are relatively higher than in other regions. The recent pandemic, however, reduced the revenues of many large and small firms in the tourism industry in the winter season of 2020/2021. Many blamed strict government regulations for this. However, government intervention also helped many firms to survive.

0455/22/M/J/23

In 2020, Australia had a high national minimum wage (NMW). The NMW is received by some people who work on Australian dairy farms. Australia produces milk and soft drinks. Milk is purchased by some people as an alternative to soft drinks. Some dairy farms and some small firms went out of business in 2020. The year saw an increase in the value of the country's floating foreign exchange rate.

- Analyse how an increase in the price of milk may affect the revenue earned by milk producers and soft drinks producers. [6]

0455/22/O/N/22

Advances in technology have changed how trees (wood) are cut down, transported, and used in the manufacture of furniture, such as tables. Wood is in inelastic supply. Wood can be supplied in all economic systems. However, public goods are not supplied in a market economic system.

- Analyse, using a demand and supply diagram, the effect on the market for furniture of an increase in the price of wood. [6]

0455/21/O/N/22

Some firms have social welfare as their main objective. Globally, the number of this type of firm is increasing. Consumers are also starting to change their spending patterns by moving towards environmentally friendly products such as solar energy. Environmentally unfriendly firms are less able to make profits and some of these firms must merge to survive.

- Analyse, using a demand and supply diagram, the effects on the solar energy industry of the change in spending patterns towards environmentally friendly products. [6]

0455/21/M/J/22

Singapore is a high-income country with a shortage of land and labour. Singapore is often given as an example of a market economy. The Singaporean government does, however, intervene in the economy. For example, it encourages its population to eat two servings of fruit and two servings of vegetables per day.

- Analyse, using a demand and supply diagram, how a greater awareness of the health benefits of eating fruit will affect the fruit market. [6]

0455/22/F/M/19

Indian Railways is a state-owned enterprise, owned and operated by the Ministry of Railways. There is currently only one privately owned railway line in India. The market for rail travel is influenced by changes in the markets for other forms of transport. For instance, changes in the supply of oil and petrol influence the market for car travel.

- Define a market. [2]
- Explain two reasons why the supply of raw materials such as oil may rise in the future. [4]
- Analyse, using a demand and supply diagram, how the oil market would be affected when the demand for oil increases by more than the supply of oil. [6]
- Discuss whether car travel will increase in the future. [8]

0455/21/O/N/18

In 2016, there was a global surplus in the steel market pushing down steel prices. This situation led to various calls for protectionist measures by other steel producers such as those in the EU and the USA. However, such measures were not supported by car producers as approximately 22% of a car manufacturer's costs depend on steel prices.

- Analyse, using a demand and supply diagram, the effect of falling steel prices on the market for cars. [6]

0455/21/M/J/18

More than 80% of Qatar's population are immigrants. Net immigration has helped to meet the country's demand for labour. As well as a shortage of workers, the country has a shortage of drinking water. The government has run public campaigns to stop people from using their free supply of drinking water to fill their swimming pools and water their gardens. In 2016, the government increased its spending to increase the country's economic growth rate.

- Explain how market forces would respond to a shortage of drinking water. [4]

0455/22/F/M/23

Serbia is the world's second largest producer of raspberries, a product with elastic demand. Consumers experience the economic problem when buying raspberries. Few raspberry farm workers are members of trade unions. Membership of trade unions in Serbia has fallen to 20% of all workers by 2020. In that year, Serbia had more state pensioners than workers.

- Identify two determinants of price elasticity of demand. [2]

0455/23/M/J/21

The demand for smartphones has become more price inelastic as the range of functions available has increased. In low-income countries, smartphones are an important tool for economic development. This is because they provide access to education and banking services which were once not available in rural areas. Smartphones have made it easier for people to borrow and save their money.

- Analyse the advantages of selling a product which is price-inelastic in demand. [6]

0455/22/F/M/21

In the Netherlands in 2018, there were 1.3 bicycles per person and the world's largest underground bicycle parking area was built in the capital city. Land is scarce in city centers, where most cycling takes place. Demand for bikes in the Netherlands is price inelastic. Only a few people in the Netherlands borrow money to buy bikes. The government encourages cycling by spending on both bike parking areas and leisure cycle parks.

- Explain two reasons why demand for a product price may be inelastic. [4]

0455/22/O/N/20

Italy is home to the world's oldest bank and some of the world's oldest car producers. Internationally, both industries are facing several challenges. The wages of bank workers and car workers are increasing. Demand for bank loans and for cars is changing, in part, due to changes in population size. It is predicted that the price elasticity of demand (PED) for cars will also change in the future.

- Discuss whether demand for cars will become more price-elastic in the future. [8]

0455/22/M/J/20

The Indian government has declared that the country, now a major car producer, will sell only electric cars by 2030. The government wants to reduce external costs, some of which are caused by petrol and diesel cars. Demand for electric cars is currently relatively low and price-elastic. The government, however, thinks that it will not need to subsidise the production of electric cars to achieve its target.

- Explain two influences on whether demand for a product price-elastic is or price-inelastic. [4]

0455/21/O/N/18

Droughts in the Pacific Coast region of the US and regulations, in the form of limits on the number of salmon that can be caught in the wild, have reduced the supply of wild salmon. These limits were imposed to avoid market failure in the salmon market. However, the effect of this on the revenue of salmon producers is uncertain. In addition, producers of farmed salmon in the US states of Washington and Alaska have received subsidies from the US government.

- Analyse how information on changes in a firm's revenue can be obtained from price elasticity of demand calculations. [6]

0455/22/M/J/18

In the UK, bus journeys outside London have fallen by nearly 40% since 1980. This fall in demand has been largely due to a rise in bus fares, a rise in income and changes in the price and quality of substitutes. On some routes, there are monopolies operating and this lack of competition can push up the price.

- Analyse how the price elasticity of demand for a product influences the revenue a firm receives. [6]

0455/22/F/M/18

Taxi drivers usually must buy a license to carry passengers. The relatively high fixed cost of the license discourages some people from becoming taxi drivers. Encouraging more people to be taxi drivers would be likely to reduce taxi fares and unemployment. It may, however, increase traffic congestion.

- Analyse how a taxi firm can use information about the price elasticity of demand for its service. [6]

0455/22/O/N/23

In the US, the supply of meat from emus, a large bird, is price-elastic. Recently, US farmers have switched to keeping other livestock and growing crops that changed their demand for labour. US farmers are influenced by the subsidies the government provides to produce selected food items. Some people are reluctant to become farm workers as they think living standards are low in rural areas.

- Define elastic supply. [2]

0455/21/O/N/23

One reason why the price of houses in cities such as Hong Kong, London, and New York is very high, is the low-price elasticity of supply of houses. Trade unions in some of these cities are calling for more affordable housing for workers. Governments are also trying to implement various microeconomic policy measures to reduce the price of houses. In addition, the stability of the housing market can impact upon the effectiveness of monetary policy.

- Analyse the key determinants of price elasticity of supply of a product. [6]

0455/22/O/N/22

Advances in technology have changed how trees (wood) are cut down, transported, and used in the manufacture of furniture, such as tables. Wood is in inelastic supply. Wood can be supplied in all economic systems. However, public goods are not supplied in a market economic system.

- Define inelastic supply. [2]

0455/22/F/M/20

The main industries in Seychelles, an island country in the Indian Ocean, are tourism and fishing. The price elasticity of the supply of fish is affected by the relatively short time that fish can be stored. Economic goods and free goods play a role in both fishing and tourism. With rises in the skills of workers and an increase in enterprise, GDP per head has increased by more than seven times over the last fifty years.

- State the formula for calculating the price elasticity of supply (PES). [2]

0455/21/M/J/18

In England, football stadiums are usually built and financed by the private sector, but in some countries, the stadiums are built and financed by the government. Many football stadiums in the English Premier League are full on match days. In the short run, the supply of seats is perfectly inelastic. The football clubs could raise prices, still sell their tickets, and so raise their profits. Premier League footballers currently receive very high wages.

- Define perfectly inelastic supply. [2]