

Workbook answers

1 The nature of the economic problem

- 1 **Correct answer: A** how to allocate scarce resources to satisfy unlimited needs and wants
Resources in an economy are scarce and needs and wants (of individuals, firms and governments) are unlimited. Option B states that wants are limited and resources are unlimited, which is incorrect as wants are unlimited and resources limited.
- 2 **Correct answer: B** public domain web pages
Public domain web pages are available to anybody with access to the internet. Access therefore is unlimited. The other options (housing, running shoes and tennis rackets) are all limited in supply and are therefore economic goods.
- 3 **Correct answer: D** selling the oil over the internet
Selling and distributing olive oil is in the tertiary sector of the economy. Options A and B are in the secondary sector as both are part of the manufacturing process. Option C (growing olive trees) is in the primary sector.
- 4 **Correct answer: D** When should production take place?
All economies address the questions: what, how, and for whom should production take place? However, when production should take place (Option D) is not a basic economic question for an economy.
- 5 **Correct answer: D** services
Services are non-physical (intangible products), such as haircuts, bus journeys and internet access. Goods (Option B) refer to physical items. Factors of production (Option A) are the resources needed to produce goods and services, i.e. land, labour, capital and enterprise. Opportunity cost (Option C) is about the sacrifice made when choosing or making a particular economic decision.
- 6 Public sector refers to economic activity directly involving the government (1), such as the provision of state education and healthcare services (1). The public sector's main aim is to provide a service (1).
- 7 Needs are goods and services that are essential for human survival (1), e.g. nutritional food, clean water, shelter, protection, clothing and access to healthcare and education (1).
Wants are human desires but not necessary for human survival (1), i.e. things people would like to have, e.g. smartwatches, holidays, cars and jewellery. (1)
Needs are largely the same for an economy, whereas wants are a matter of personal choice and unlimited due to human nature. (1)
- 8 Economic goods are those that are limited in supply (1), so human effort is required to obtain these, such as oil, wheat, cotton, housing and cars (1).
Free goods are goods that are unlimited in supply (1), such as air or seawater (1). Hence, there is no opportunity cost in terms of their output (1).
- 9 Goods are physical or tangible items (1), such as tables, cars, toothpaste and pencils (1).
Services are non-physical or intangible items (1), such as haircuts, bus journeys, telephone calls and internet access (1).

- 10** The basic economic problem is concerned with how best to allocate scarce resources (1) in order to satisfy people's unlimited needs and wants (1). Poverty can be defined as people being unable to meet their basic economic needs (1). For example, many people around the world have to live on less than \$1.25 a day (1), so suffer from extreme poverty. These people cannot meet their basic human needs, such as food, water, shelter, clothing, healthcare and education (1).

Workbook answers

2 The factors of production

1 Correct answer: A factors of production

Factors of production are the resources needed to produce any good or service, i.e. land (raw materials), labour, capital (such as production facilities) and enterprise.

2 Correct answer: D land

In economics, the term 'land' refers to all natural resources (raw materials) used in the production process, e.g. oil, coal, water, wood, metal ores and agricultural products.

3 Correct answer: B profit

Enterprise refers to the skills a businessperson requires to successfully combine and manage the other three factors of production. In return, if successful, the entrepreneur earns a profit.

4 Correct answer: A geographical mobility

Geographical mobility refers to the willingness and ability of a person to move to from one area to another location for employment purposes.

5 Correct answer: A capital

Capital refers to the manufactured resources required in the production process, e.g. machinery, tools, equipment and vehicles.

6 Land includes all natural resources (1) or raw materials required in the production process, e.g. water (1), wood (1), metal ores (1) or agricultural products (1).

7 Explanations might include:

- An increase in the national minimum wage (1) will cause higher labour costs (1), which will reduce the demand for labour (1).
- Government policies such as lower income taxes to create incentives to work (1) will increase the quantity of labour resources (1).
- New government rules and regulations (1) will tend to increase costs of production (1).
- New production technologies (1), such as automation, will allow firms to produce more output (1).
- Net migration of labour (1) will affect the quantity of labour in the economy (1), e.g. if more people migrate to a country, the quantity of labour will increase (1).
- Improvements in education and healthcare (1) will improve the quality of labour in the workplace (1).
- Unfavourable weather conditions, such as severe droughts or flooding (1) will reduce the supply of agricultural products (1); similarly, natural disasters (1) could significantly reduce output in the economy (1).

8 a Geographical mobility refers to the suitability of a factor of production to move from one use to another (1). For example, labour mobility is the willingness and ability of workers to relocate for employment purposes (1).

- b** Labour refers to the human resources required in the production process (1). For example, labour is required at Coca-Cola to work on the production line (1), perform administrative tasks (1), and promote the drinks to customers (1). Without workers, production could not take place (1).
- 9** New technologies allow firms to produce more output (1). They can also enable people to perform their jobs better (1), thereby improving labour productivity (1). For example, ICT developments such as Google Classrooms (1) have improved teaching and learning in schools (1). Automation in the car industry (1) has also increased the productivity of factors of production (1).
- 10** Using the production of Coca-Cola drinks as an example, analysis might include:
- Land: the natural resources required to make Coca-Cola (1), e.g. sugar, water and caffeine (1).
 - Labour: people to work on the production line (1), perform administrative tasks (1), and promote the drinks to customers (1).
 - Capital: the non-natural or manufactured resources used to produce Coca-Cola drinks (1), such as a factory (1), machinery (1), and delivery trucks (1) to transport the drinks to warehouses and retailers.
 - Enterprise: the risk-taking and business skills necessary to organise the production process (1), and to motivate workers so they work to the best of their ability (1), in the pursuit of profit.
 - Without any one of these factors of production, the production of Coca-Cola could not take place (1).

Workbook answers

3 Opportunity cost

- 1 Correct answer: A** In most cases, there is an alternative option.

Opportunity cost is the cost of the next best opportunity given up when making economic decisions. In almost all cases, choices made have an opportunity cost, as there is usually an alternative option or choice.

- 2 Correct answer: B** the difference in earning potential by attending university

By choosing to study economics at university, the student is giving up the money that could have been used elsewhere if university was not chosen (Option A), the option to study another subject such as geography (Option C) and the choice to work (Option D). The higher earnings, rather than the opportunity cost, is the potential reward for attending university.

- 3 Correct answer: B** 2 kg

The opportunity cost of producing an extra 5 kg of potatoes is 10 kg of carrots. Therefore, the ratio is 5:10, i.e. the opportunity cost of producing 1 kg of potatoes is 2 kg of carrots.

- 4 Correct answer: B** 3 units

For each 3 extra units of producer goods, the economy sacrifices 9 units of consumer goods. This gives a ratio of 3:9, so the opportunity cost of producing 1 extra unit of producer goods is 3 units of consumer goods.

- 5 Correct answer: C** \$250

Although the bicycle was \$350 when new, by selling it now, the owner would only receive \$250. Hence, this is the opportunity cost of keeping the bicycle.

- 6** Opportunity cost is the cost of the next best opportunity forgone (1) when making a decision (1).

- 7** Opportunity cost is the cost of the next best opportunity forgone (1) when making a decision (1).

When constructing a new airport, the opportunity cost could include:

- using the same government funds to build public housing (1) for low-income families (1)
- the loss of land (1) which could have been used for other purposes, such as hospitals or schools (1)
- the loss of natural habitats (1) due to land being used to construct the new airport

- 8** The opportunity cost is the wages given up, plus the cost of the theatre ticket, i.e.

$$(\$10.50 \times 2) + \$15 = \$36.$$

(1 mark for the correct working out, and 1 mark for the correct answer.)

- 9** The answer is \$18 per hour (1), as this is the next best alternative that Sangita is giving up to take driving lessons (1).

- 10** Analysis might include:

- Opportunity cost is the cost of the next best opportunity forgone (1) when making an economic decision (1).
- In this case, Tiga could choose to play football for the London club, but the opportunity cost of doing so could include:
 - completing his studies at school (1)

- the earning potential, should he complete his formal education (1)
- what else he could be doing in the next 4 years (1), including spending more time with family and friends (1)
- leisure time (1), as he would be playing full-time football in London (1)
- the opportunity to go to and experience university life (1)

Workbook answers

4 Production possibility curve

1 Correct answer: A higher prices

The production possibility curve (PPC) shows the productive capacity of the economy, which can be increased by Options B, C and D. However, higher prices (Option A) are likely to be the result of more economic activity, but do not cause the economy to be able to produce more.

2 Correct answer: C productive capacity

An increase in the productive capacity of the economy (Option C) means there is greater potential output of goods (Option A) and services. Economies do not strive to achieve greater unemployment (Option D) or to increase opportunity costs of decisions (Option B).

3 Correct answer: C an increase in the quantity of factors of production

The PPC can be shifted outwards by improving the quantity and/or quality of factors of production. Hence, Options A and B cannot be correct. Higher levels of unemployment (Option D) will cause an inward shift of the PPC.

4 Correct answer: A a decrease in oil production from O_2 to O_1

To increase production of wheat from W_2 to W_1 it is necessary to decrease production of oil from O_2 to O_1 . This is because the PPC represents the maximum amount of wheat and oil that can be produced at each level of output, with all resources used efficiently. Options B and D are incorrect because to increase production of wheat it is necessary to decrease oil production. Option C requires an increase in the productive capacity of the country.

5 Correct answer: D F

It is possible to increase production within the economy without incurring an opportunity cost, i.e. it is possible to increase both production of wheat and oil without any opportunity cost. Options A and B are on the production possibility curve and therefore represent maximum output in the economy. Point E (Option C) is unattainable given the current resources in the economy.

6 Country X could invest in machinery and/or technology (1) and this would increase the productive capacity of the economy as more oil and wheat could be produced (1) with the same amount of resources (1).

Country X could also train workers (1) to increase their skills and this might increase their productivity (1) as workers become more efficient at producing oil and wheat (1).

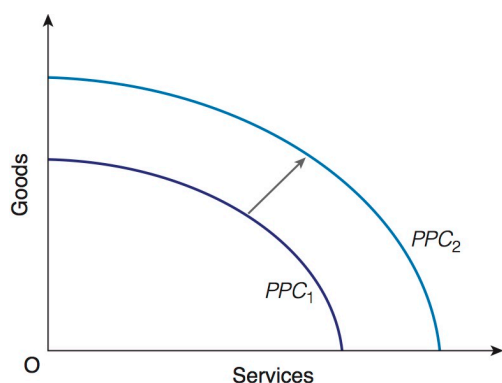
7 Productive capacity refers to the maximum combination of goods and services (1) which can be produced in an economy at any point in time (1), with all resources being used efficiently (1). It is shown by the production possibility curve (1).

8 a The PPC shows the maximum combination of goods and services (1) which can be produced in an economy at a particular point in time (1). It shows the productive capacity of the economy (1), when all resources are used efficiently (1).

- b** Opportunity cost is the cost of the next best opportunity forgone (1) when making decisions (1). The PPC diagram is a graphical representation of the maximum combinations of goods and services (1) that can be produced in an economy. By producing a certain combination of, for example, consumer and producer goods, the economy forgoes other combinations of these goods (1), i.e. producing more consumer goods means sacrificing the output of capital goods (1).
- 9** The two conditions are as follows:
- All productive resources are used (1), so there is no unemployment of factors of production (1).
 - There is efficiency in the use of resources (1), so factors of production are allocated to their best use or purpose (1).
- 10** Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

An outwards shift of the production possibility curve is shown in the following diagram:



The consequences of an outwards shift of the production possibility curve could include the following:

- The economy can produce more goods and services, without necessarily incurring an opportunity cost.
- An increase in productivity capacity means more jobs can be created.
- There may be an increase in the quality of factors of production, such as better-skilled labour through investments in education, research and training, further improving the international competitiveness of the economy.
- It may result in increased productivity and more goods and services being available for the general public.
- There may be an improvement in standards of living if people are able to enjoy more goods and services.
- Technological advances and improved production techniques could lead to better-quality goods and services.
- Negative consequences could also be considered, such as environmental degradation from higher levels of economic activity, e.g. environmental waste or pollution.

Workbook answers

5 Microeconomics and macroeconomics

1 Correct answer: D microeconomics

Microeconomics is the study of particular markets and sections of the economy, rather than the economy as a whole (which is called macroeconomics, Option C).

2 Correct answer: C macroeconomics

Macroeconomics is about decision making of the whole economy, rather than individual markets (which is called microeconomics, Option D).

3 Correct answer: D labour markets

Microeconomics is the study of particular markets and sections of the economy, such as labour markets. Economic growth (Option A), employment and unemployment (Option B) and inflation (Option C) are topics studied in macroeconomics.

4 Correct answer: D redistribution of income

Macroeconomics is about decision making of the whole economy. The redistribution of income has impacts on the macro economy, such as household consumption levels. The other topics (market failure, market structures and PED) are studied in microeconomics.

5 Correct answer: C governments

The government makes decisions that affect the whole economy, such as changes in interest rates or tax rates. The other options (entrepreneurs, firms and individual households) are microeconomic decision makers.

6 Microeconomics is the study of particular markets (1) and sections of the economy (1). It is concerned with the economic factors that affect choices (1) and the effects of changes in these factors on decision makers such as individuals, households and firms (1).

7 Macroeconomics is the study of economic behaviour and decision making in the whole economy (1). It involves aggregate variables (1), rather than individual markets, such as the demand for all goods and services in the economy (1) and the general price level in the economy as a whole (1).

8 Explanations might include:

- Entrepreneurs (1) deciding which type of business to start (1), or how best to allocate different resources (1).
- Firms (1) investigating the prices being charged by their rivals (1) in order to set their own prices (1), or deciding on the best combination of factors of production to use (1) in order to maximise profit (1).
- A household (1) considering the economic costs of raising a child (1), or the opportunity cost of spending money on a new car (1).

9 Explanations might include:

- Governments (1) making decisions regarding which products to tax (1), e.g. tobacco, alcohol and petrol (1)
- Governments (1) deciding on policies to achieve the macroeconomic goals (1) of economic growth, stable inflation, employment, balance of payments stability and redistribution of income (1).
- Governments (1) deciding to improve the productive capacity of the economy (1), e.g. education and training, and increasing incentives to work and invest (1).
- Multinational companies (1) in the determination of the degree of international trade (1) and exchange rates (1).

10 a Possible reasons for locating in the UK could include:

- government incentives for Facebook to locate in the UK (1), such as lower tax rates (1) or subsidies to lower operational costs (1)
- having an established market in the UK (1), with high earnings of £800 million (1), so the UK market is a stable one for Facebook (1)
- access to skilled labour in the UK (1), enabling the multinational to thrive and survive in Europe (1)

b Explanations might include:

- Facebook's decision to invest in the UK will provide employment opportunities (1), with at least 800 jobs being created (1) — this helps to increase spending in London and the British economy (1).
- The decision to invest will boost consumer and producer confidence levels (1), especially following the uncertainties of Brexit (1).
- The decision to invest will contribute to economic growth in the UK (1) due to greater investment, spending and employment (1) in the economy.

Workbook answers

6 The role of markets in allocating resources

1 Correct answer: B equilibrium price and quantity traded

Changes in non-price factors that affect demand or supply cause a shift in the demand or supply curve, resulting in a change in the equilibrium price and quantity traded. For example, higher demand for a good or service will tend to increase the market price. A higher level of supply will cause the price to fall, *ceteris paribus*.

2 Correct answer: B a higher price and lower level of quantity demanded

The sales tax raises production costs, so will tend to force the price to increase, thereby lowering the quantity demanded.

3 Correct answer: A price changes

Price changes do not cause a shift in supply; price changes are a result of a change in supply factors. Spare capacity (Option C) relieves pressure on suppliers having to raise prices. Sales taxes (Option B) raise production costs, so force prices to increase. By contrast, subsidies (Option D) reduce production costs, so tend to cause prices to fall.

4 Correct answer: A Equilibrium quantity falls and the price falls.

A fall in the demand for a good or service shifts the demand curve to the left, forcing prices to fall and the quantity traded also to fall.

5 Correct answer: B lower income taxes

Lower income taxes allow individuals and households to have greater disposable incomes. Hence, their level of consumption (spending) is likely to rise, shifting the demand curve for most goods and services to the right. Lower sales taxes (Option C) shift the supply curve, as sales taxes affect a firm's production costs.

6 Possible factors include changes in:

- income (1)
- marketing and advertising (1)
- availability and price of substitutes (1)
- consumer confidence levels (1)
- habits, tastes and trends (1)
- the weather, for certain goods such as ice cream, sunglasses and winter jackets (1)

7 While a movement along a demand or supply curve is caused by price changes only (1), a change in all other or non-price factors (1) that affect demand or supply will cause a shift of the curve (1). This results in price changes (1).

8 Explanations might include:

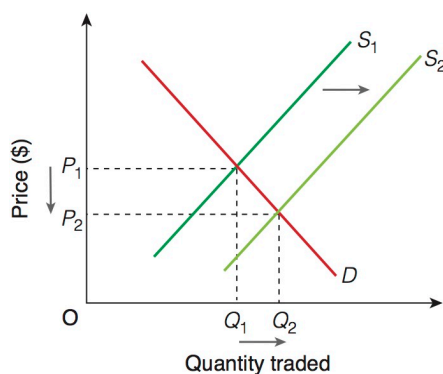
- An increase in household disposable incomes (1), may cause greater demand for luxuries (1), such as foreign holidays.
- A successful advertising (1) may make a foreign destination more attractive to holidaymakers (1).

- Improved transportation links (1), may improve the convenience (1) and reduce the costs (1) for holidaymakers.
- An increase in the exchange rate (1), may cause the costs of a foreign holiday to fall (1).

9 Explanations might include:

- Avocado crops may have been damaged (1) due to natural disasters (1), such as floods or earthquakes (1).
- Adverse weather conditions (1), such as a lack of rainfall (1), may have reduced the output or supply of avocados (1).
- The imposition of a government sales tax (1) on the sale of avocados and food items may have raised production costs (1).

- 10 An accurately drawn and labelled diagram should show a rightward shift of the supply curve (1) due to the imposition of the government subsidy, and a downward-sloping demand curve for electric cars. The subsidy reduces the production costs of electric cars (1), allowing producers to raise output (1). An increase in the supply of electric cars will tend to reduce the market price (1). Hence, the diagram should show a lower equilibrium price and higher equilibrium quantity (1).



Workbook answers

7 Demand

1 Correct answer: A effective demand

Effective demand is used to suggest that demand is backed by both the ability and the willingness of customers to pay a certain price to buy a particular good or service.

2 Correct answer: A Consumers are more aware of health issues related to sugar.

If consumers become more aware of the health issues related to sugar, they are less likely to buy sugar, shifting the demand curve to the left.

3 Correct answer: C higher interest rates in China

Higher interest rates in China make it more expensive to borrow money to buy cars, and encourage more saving rather than spending.

4 Correct answer: B shampoo and conditioner

Customers who buy shampoo are likely to need conditioner too. Option C is incorrect as sugar is not jointly demanded with tea (indeed, not all tea drinkers use sugar, and it really depends on the type of tea being considered).

5 Correct answer: C subsidies

Factors that affect demand include income (Option A), price (Option B) and the price and availability of substitutes (Option D). However, the imposition of subsidies (Option C) affects the supply curve.

6 The demand curve is downwards sloping due to the law of demand (1), i.e. as price rises, quantity demanded tends to fall (1) due to a lower ability and willingness of customers to pay (1).

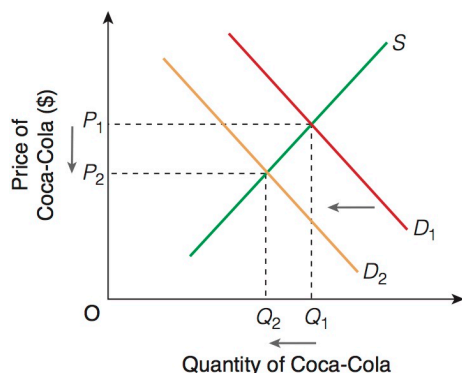
7 A *movement* along the demand curve is caused by changes in the price of a good or service (1). Higher prices cause contractions in demand (1), whereas lower prices cause expansions in demand (1). However, a *shift* in demand is caused by changes in non-price factors (1) that affect demand, e.g. changes in income, advertising and the price of substitute products (1).

8 Explanations might include

- The higher the level of consumer incomes (1), the higher the demand for ice cream (1), all things being equal.
- Favourable weather conditions (1) tend to raise the demand for ice cream (1).
- Public awareness of the health implications of eating ice cream (1), such as tooth decay and diabetes, may reduce the demand for ice cream (1).

9 Individual demand refers to demand of an individual, a household or a single firm (1). It shows the quantity demanded of a good or service that a single economic agent would buy at different prices (1). An example is where a cinema charges \$10 for its movie tickets and at that price, male customers purchase 500 tickets per week while females customers purchase 400 tickets per week (1). The market demand refers to the sum of all individual demand for a product (1) and is found by adding up all individual demand at each price level (1). So the market demand for cinema tickets at \$10 per ticket is would be 900 tickets per week (1).

- 10 Up to 4 marks for the diagram: axes correctly labelled (1), a leftwards shift of the demand curve for Coca-Cola (1), an upward-sloping supply curve for Coca-Cola (1), and a lower equilibrium price and lower equilibrium quantity (1).



Up to 2 marks for analysis: Pepsi's successful advertising campaign is a change in a non-price factor (1) which shifts the demand curve to the left (1), resulting in a fall in the equilibrium price (1) and quantity demanded (1). As Pepsi is a close substitute for Coca-Cola (1), the advertising campaign could have significant impact on the demand for Coca-Cola (1).

Workbook answers

8 Supply

1 Correct answer: C supply

Supply refers to both the willingness and ability of firms to provide a particular good or service at different price levels.

2 Correct answer: B New technologies mean customers have switched to alternative energy sources.

If customers switch to alternative energy sources, the demand curve for coal shifts to the left, thereby reducing the market price of coal. In turn, this causes the supply of coal to contract due to the law of supply, i.e. a fall in the price causes supply to fall. Option A is incorrect as consumer incomes affect the demand curve. Option C would cause the supply curve to expand due to the higher price of coal. Similarly, the discovery of new coal supplies (Option D) causes an increase in supply.

3 Correct answer: A an increase in household disposable incomes

An increase in household disposable incomes will tend to shift the demand curve for cars, not the supply curve, to the right. Options B, C and D will shift the supply curve of cars to the right as these are non-price factors that increase the market supply.

4 Correct answer: A a fall in the price of tomato sauce

A fall in the price of tomato sauce is clearly a price factor that affects supply. The law of supply states that as the price falls, so does the quantity supplied due to a reduction in the willingness and ability of firms to supply tomato sauce at a lower price. The other options shift the supply curve.

5 Correct answer: A income

Income is a determinant of demand, rather than supply. Although price (Option B) affects demand too, it is also a determinant of supply. An increase in productive capacity or having spare capacity (Option C) can increase market supply. In general, more can be supplied if more time is given (Option D).

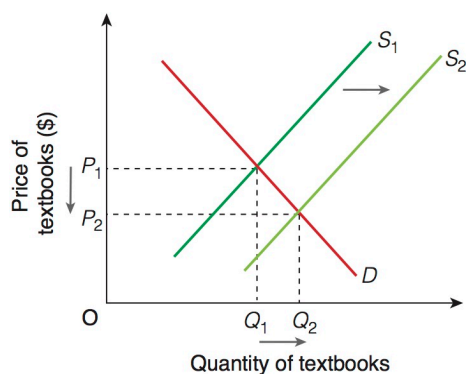
6 An ordinary supply curve is upwards sloping, showing a positive correlation (1) between price and the quantity supplied (1). This is because the law of supply states that at higher prices, firms are more willing and more able to supply (1) at each given price level.

7 A *movement* along the supply curve is caused by changes in the price of the good or service (1). A *change* in all non-price factors that affect the supply of a good or service will cause a shift in the supply curve (1).

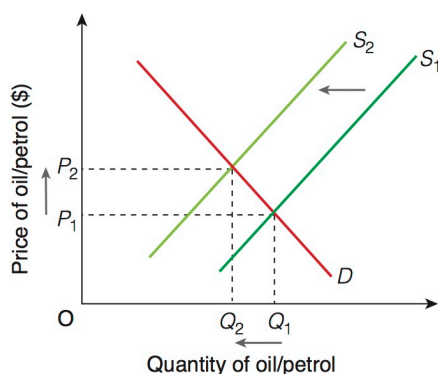
8 Explanations might include:

- Technological advances (1) increase productivity and supply of motor vehicles, shifting the supply curve to the right (1).
- An increase in the price of raw materials (1) will raise the costs of producing motor vehicles (1), hence shift the supply curve to the left (1).
- An increase in the cost of labour (1) results in an inwards shift of the supply curve (1) in order for firms to maintain their profit margins (1).

- An increase in the number of motor vehicle manufacturers (1) will cause an increase in the market supply (1).
 - Higher taxes (1) increase the cost of producing/supplying motor vehicles, so shift the supply curve to the left (1).
 - Government subsidies (1) help to reduce the cost of producing/supplying motor vehicles (1), so shift the supply curve to the right (1).
- 9 An accurately drawn and labelled diagram should show a rightward shift of the supply curve (1) following the subsidies being awarded, and a downward-sloping demand curve (1). The subsidies reduce the costs of publishing textbooks (1), so the market price is lower (1) and a larger quantity is supplied (1). Hence, the diagram should show a lower equilibrium price and higher equilibrium quantity (1).



- 10 Up to 4 marks for the diagram: axes correctly labelled (1), a downward-sloping demand curve for oil/petrol (1), a leftward shift of the supply curve (1), a higher equilibrium price and lower equilibrium quantity (1).



Up to 2 marks for analysis: the imposition of the tax raises the costs of supplying oil/petrol (1), so shifts supply to the left (1). As the market price is higher (1), it reduces the quantity traded (1).

Workbook answers

9 Price determination

1 Correct answer: C market equilibrium

Market equilibrium exists when the demand for a product is equal to the supply of the product, thus determining the equilibrium price and equilibrium quantity traded.

2 Correct answer: D market disequilibrium

Market equilibrium exists when the demand for a product is equal to the supply of the product. By contrast, there is a situation of market disequilibrium if there is excess demand (shortages) or excess supply (surpluses).

3 Correct answer: C shortage

When the demand for a product exceeds the supply (excess demand), this causes a shortage in the market because the price is lower than the market equilibrium.

4 Correct answer: B excess supply

When the price of a product is above the market equilibrium price, supply will exceed demand (excess supply). This creates a surplus in the market.

5 Correct answer: A At \$10 per unit, there is excess supply of 3000 units.

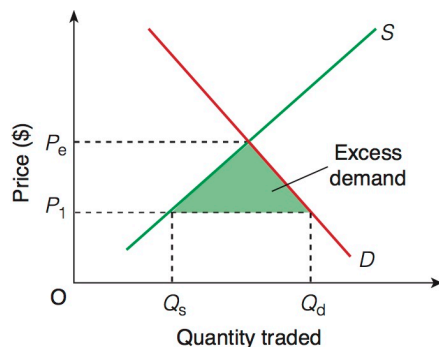
At \$10 per unit, supply is 21,000 units whilst demand is only 18,000 units, i.e. there is excess supply (a surplus, rather than a shortage) of 3000 units.

6 Market equilibrium exists when the demand for a product matches the supply (1), so there is no excess demand (shortage) or excess supply (surplus) (1).

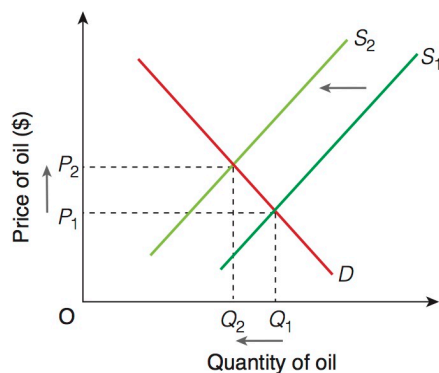
7 A shortage or surplus occurs when the price of a product is below or above the market equilibrium (1). A shortage occurs when there is excess demand (1). A surplus occurs when there is excess supply (1). Reward the use of appropriate examples (1) of excess demand or supply.

8 Equilibrium price occurs where demand and supply are equal (1), i.e. surpluses and shortages do not exist, so there is no pressure on the price to change (1). By contrast, disequilibrium price exists when demand and supply are not equal (1): there is a surplus when price is above the market equilibrium and a shortage when price is below the equilibrium (1).

9 The answer should include an accurately labelled diagram (1) that shows excess demand existing at all prices below the equilibrium (1). Excess demand occurs when demand exceeds supply (1) because the price is lower than the market equilibrium, resulting in a shortage (1).



- 10 Up to 4 marks for the diagram: axes correctly labelled (1), a downward-sloping demand curve for oil (1), a leftward shift of the supply curve (1), a higher equilibrium price and lower equilibrium quantity (1).



Up to 2 marks for analysis: the imposition of a tax on oil suppliers causes an increase in their costs (1), thus shifting the market supply curve to the left (1). This raises the equilibrium price from P_1 to P_2 (1) and subsequently reduces the quantity traded from Q_1 to Q_2 (1).

Workbook answers

10 Price changes

- 1 Correct answer: B** higher price and lower quantity traded

If a government raises the tax on the sale of cigarettes and tobacco, this will increase production costs, so result in a higher price and hence a lower quantity traded.

- 2 Correct answer: D** higher costs of fertilisers

Higher costs of fertilisers will raise production costs for the agricultural sector, thereby causing a leftwards shift of the supply curve.

- 3 Correct answer: C** imposition of a new vehicle registration tax

The imposition of a new vehicle registration tax will raise production costs for petrol car manufacturers. This factor therefore directly affects suppliers, rather than customers (even though they are very likely to have to pay a higher market price).

- 4 Correct answer: B** The price rises.

Excess demand occurs when the price is below the market equilibrium price. This suggests that prices have to increase in order to address the shortage.

- 5 Correct answer: A** Quantity demanded falls.

The market demand for Nike sports shoes is likely to fall (Option A) as customers switch to buying the relatively cheaper Adidas sports shoes. Of course, this assumes that the two products are substitutes.

- 6** Possible factors could include:

- the imposition of a sales tax (1), or an increase in the rate of sales tax (1)
- adverse weather conditions for agricultural output (1)
- higher production costs (1)
- a fall in the number of suppliers (1)

- 7** Technological progress might increase prices due to the higher costs of the new technologies (1) or due to customers being willing to pay more to purchase superior products (1).

It might cause prices to fall due to improvements in productivity (1), or because it enables the firm to raise output to benefit from economies of scale (1), thereby allowing prices to fall.

- 8** Explanations might include:

- An increase in the supply of milk (1) may cause milk prices to fall, perhaps due to more competitors/suppliers (1) or an increase in cow stocks (1).
- A fall in quantity demanded (1) may cause milk prices to fall, perhaps due to a fall in the price of substitutes such as powdered milk (1) or a health scare (1).

- 9** Higher fuel taxes will raise the costs of private motoring (1). This will cause the supply curve of motor vehicles to shift to the left (1), resulting in a higher price (1) and a reduction in quantity traded (1).

10 Explanations might include:

- Higher levels of consumer incomes (1) have enabled more people to enjoy Starbucks coffee (1).
- Coffee drinking has become fashionable (1), so a growing number of customers increases the market demand (1).
- Product differentiation (1) has enabled Starbucks to stand out from its competitors (1).
- Customer loyalty schemes (1) have enabled Starbucks to attract and retain more customers (1).

Workbook answers

11 Price elasticity of demands

- 1 **Correct answer: B** -0.5

Price elasticity of demand = $\% \Delta Q_D / \% \Delta P$

$$PED = -5 / +10 = -0.5$$

- 2 **Correct answer: D** -0.25

Price elasticity of demand = $\% \Delta Q_D / \% \Delta P$

$$PED = -2 / +8 = -0.25$$

- 3 **Correct answer: D** to identify changes in the spending patterns of consumers

Knowing the PED for a particular product enables firms to know more about how consumer spending is likely to change following a change in the price of the product. For example, if demand is price inelastic, then an increase in the price will not cause consumers to change their spending by very much due to the lack of substitutes.

- 4 **Correct answer: B** It will increase.

When price is lowered from P_1 to P_2 the quantity demanded increases from Q_1 to Q_2 . Total revenue at P_1 (calculated by multiplying P_1 and Q_1) is lower than the total revenue at P_2 (calculated by multiplying P_2 and Q_2). The reason for this is that the percentage change in quantity demanded is greater than the percentage change in price and therefore demand is elastic.

- 5 **Correct answer: C** -0.6

$$PED = \frac{\% \text{ change in quantity}}{\% \text{ change in price}} = \frac{+15\%}{-25\%} = -0.6$$

Hence, the correct Option is C, i.e. the demand for peas is price inelastic.

- 6 **a** $PED = \frac{(8640 - 8000) / 8000}{(225 - 250) / 250} = \frac{+8\%}{-10\%} = -0.8$

(1 mark for the working out and 1 mark for the correct answer.)

- b** Explanations might include:

- $PED = -0.8$ so the demand for HTC smartphones in Taiwan is price inelastic (1). This means it is not a good decision to reduce prices, i.e. the proportional change in quantity demanded (+8%) is less than the percentage change in price (−10%) (1). Hence, the firm will lose revenue (1).
- Total revenue has fallen from \$2m per week ($\250×8000) to \$1.944m per week ($\225×8640) (1). Hence, the decision to cut prices was not a good business decision as HTC has seen a drop of \$56,000 in sales revenue per week (1).

- 7 a $PED = -0.55$, a 10% increase in price causes demand for cigarettes to drop by only 5.5% ($-0.55 \times 10\%$) (1) because the demand is price inelastic (1).
- b Explanations might include:
- For smokers, there are few close substitutes that can replace cigarettes (1) so demand remains price inelastic (1).
 - The more addicted to tobacco a smoker is (1), the less sensitive they are to price changes (1), and demand remains price inelastic (1).
 - An increase in the price of cigarettes may not have a significant impact on a smoker's overall income (1), and demand remains price inelastic (1).
 - A successful anti-smoking campaign (1) may change a consumer's cigarette-buying habits if they are persuaded to adopt a healthier lifestyle (1), making demand more price elastic (1).
 - Continual increases in the price of cigarettes over time (1) may encourage consumers to stop smoking in the long run (1), making demand more price elastic (1).
- 8 Analysis might include:
- PED is the responsiveness of quantity demanded to a change in price (1).
 - If demand is price elastic, a fall in price will raise revenue (1) because the increase in demand for flights will be greater than the decrease in price (1).
 - If demand is price inelastic, a fall in price will reduce revenue (1) because the increase in demand for flights will be lower than the decrease in price (1).
 - Flights have different PED at certain times of the day/week/year (1) and therefore the airline will need to decide which flights it can lower or raise the price of (1).
 - The effect of lower prices on profits will depend on costs of the airline company (1).
- 9 a $PED = \frac{(215 - 240) / 240}{(280 - 250) / 250} = \frac{-10.4\%}{+12\%} = -0.867$
- b Explanations might include:
- Knowing the PED for its best-selling sunglasses is price inelastic (0.867), the firm can raise its price (1) knowing that total revenue will increase (1), from \$60,000 ($\240×250) to \$60,200 ($\280×215) (1).
 - Knowledge of PED can also inform Sanchez Sunglasses about the extent to which the firm has market power (1), e.g. if demand becomes more price elastic (its PED is not too far off from a value of 1.0), the firm may need to improve the marketing of its sunglasses to customers (1).
- 10 Analysis might include:
- The availability of substitutes for a good or service (1). For example, demand for a bus journey may have inelastic demand because there are no alternative forms of public transport on that route (1). Other examples of inelastic goods are private education (1) and prescribed medicines (1). Demand for apples is elastic (1), and has a value of greater than 1 because there are many substitutes for the fruit (1). Other examples of goods/services with many substitutes are smartphones (1), running shoes (1) and jeans (1).
 - Habits and addiction (1). If a person is a smoker, his/her demand for cigarettes is inelastic (1) because he/she will buy the cigarettes even if the price rises (1).

- Interests (1). People who have hobbies and interests that they are devoted to (1), e.g. watching live sports (1), playing golf (1) and cycling (1), are likely to spend money on their interest even if the cost of doing so increases (1).
- The proportion of income spent on a good (1). Demand for sugar, salt and toothpicks tends to be inelastic demand (1) because a person will spend a small amount of their income on these goods (1). Even if the price of the goods increases, they will continue to buy more or less the same amount as the price rise is insignificant (1). On the other hand, if a person spends a larger proportion of his/her income on a good or service (1), such as a luxury holiday (1) or a restaurant meal (1), then if the price increases, demand will fall by a greater degree (1) and will be price elastic (1).
- The degree to which a good or service is a necessity (1). Products that are regarded as essential (such as food, fuel, medicines, housing and transportation) (1) tend to be relatively price inelastic (1) because households need these goods and services, so will continue to purchase them even if their prices rise (1). By contrast, the demand for luxury products (such as Gucci suits, Chanel handbags and Omega watches) (1) is price elastic (1) as these are not necessities for most households (1).
- Time (1). If prices of goods and services increase (or decrease) over time (1), people may demand less (or more) of the good or service (1). For example, if the price of petrol and diesel cars continues to increase (1), a person may decide to purchase an electric car in the future (1). If domestic electricity prices continue to increase (1), people may seek alternative power sources such as solar power in the long run (1).

Workbook answers

12 Price elasticity of supply

- 1 **Correct answer: C** +0.5

$$PES = 5\% \div 10\% = +0.5$$

- 2 **Correct answer: C** +0.25

$$PES = 2\% \div 8\% = +0.25$$

- 3 **Correct answer: C** to estimate the changes in a firm's costs of production

The value of PES shows the extent to which supply can respond to changes in the market price of the product, based on its costs of production. Option A is a macroeconomic topic, whereas supply theory is a microeconomic topic. Options B and D are related to demand, rather than supply.

- 4 **Correct answer: A** haircuts at a local hair salon

In the short run, barbers could work overtime if the market price of haircuts increased; in the long run, more barbers could be hired. It is relatively more difficult to increase the output of organic oranges (Option B), at least in the short run. There is a finite/fixed number of original paintings by Picasso (Option C), so this has the lowest value of PES. Increasing the number of season tickets (Option D) is very difficult due to the fixed capacity of the stadium (unless Real Madrid Football Club moved to larger premises in the long run).

- 5 **Correct answer: C** 0.25

The percentage change in quantity supplied is -5% , i.e. $(9500 - 10,000) / 10,000$. The percentage change in price is -20% , i.e. $($4 - $5) / 5 . Hence $PES = -5\% \div -20\% = 0.25$.

- 6 **a** Since $PES = 0.95$, a 10% increase in the price of chocolates would increase supply by 9.5% (1), i.e. $9.5 / 10 = 0.95$ (1). This means supply is relatively price inelastic (1), perhaps due to the time it takes to harvest coco beans (1).

b Explanations might include:

- Time (1) — in the short run, the supply of coco beans/chocolate is fixed (1) whereas it can be variable in the long run depending on the market price of coco beans/chocolate (1).
- Spare capacity (1) — the PES of chocolate will be higher if firms have spare capacity to produce more chocolates (1).
- Inventories (1) — the greater the ability to store the chocolates, the higher the PES will be (1).

- 7 **a** Percentage change in supply = $(10,500 - 10,000) / 10,000 = 5\%$

$$\text{Percentage change in price} = ($4.8 - $4) / $4 = 20\%$$

$$PES = 5/20 = +0.25$$

(1 mark for working out and 1 mark for correct answer.)

- b** The PES of lemons is price inelastic (1). This suggests that supply is relatively unresponsive to a change in the market price (1). A 20% increase in the price has caused supply to increase by only 5% (1). This is likely to be due to the long time it takes for suppliers to harvest lemons (1), despite the increase in the market price. It may also be due

to the lemons being perishable products (1), so suppliers are not able to store large numbers of lemons for long periods of time (1).

- 8 Supply is said to be *price inelastic* if firms find it difficult to change production in a given time period (1) due to a change in the market price (1). Examples firms supplying organic produce (1), fresh flowers (1) and cruise liners (1).

In contrast, supply is said to be *price elastic* if firms can quite easily increase supply without a time delay (1) if there is an increase in the price of the product (1). Examples include firms producing bottled water (1), carbonated soft drinks (1), printing paper (1) and toothpaste (1).

- 9 The PES for breakfast cereal is likely to be price elastic (1) because firms are able to mass-produce it in response to an increase in the market price of breakfast cereal (1). In addition, firms have the ability to accumulate stocks of breakfast cereal, as there is usually a lengthy period before its expiry (1) to be released on the market should the price increase (1).

- 10 Answers will vary. Factors that affect the value of PES include:

- the degree of spare productive capacity
- the level of (spare) stocks
- the number of producers in the industry
- the ease and cost of factor substitution, e.g. using machinery instead of labour
- the time period under consideration

(1 mark for a factor that affects PES and 1 mark for an explanation. 1 mark for the use of a relevant example to supplement the explanation.)

Workbook answers

13 Market economic system

1 Correct answer: B economic system

Economic system refers to the different ways in which an economy can be organised, i.e. whether it is a planned, free market or mixed economy.

2 Correct answer: B incentives to work

The market economic system enables private individuals and firms to decide what, how and for whom production should take place. This creates incentives to those in the private sector to work hard for economic returns. Hence, Option B is an advantage, not a disadvantage, of the market economic system.

3 Correct answer: B market economy

The market economic system enables private individuals and firms to decide what, how and for whom production should take place. In turn, these decisions are based on the market forces of demand and supply. For example, a farmer is likely to allocate more resources to harvesting corn than wheat if the market price of corn is higher.

4 Correct answer: B income and wealth inequalities

In a free market economy, resources are allocated on the basis of demand and supply, e.g. highly skilled workers are paid more than those with a lack of desirable work skills. This can result in huge inequalities in income and wealth (Option B). The other options are disadvantages of operating a planned economy.

5 Correct answer: C excess packaging

The market economic system promotes and encourages competition. Whilst this has its benefits, one downside is that competition can sometimes be very wasteful, such as producers using packaging as a way to differentiate and promote their products and brands. This often leads to excess packaging, including plastic and non-biodegradable waste.

6 In general, the forces of demand and supply (1) for the product determine its price. For example, the higher the level of demand for gold, the higher the price tends to be (1). By contrast, the higher the supply of a product, such as salt or barley, the lower its market price tends to be (1).

7 Features of a market economic system include the following:

- It relies on the market forces of demand and supply (1) to allocate scarce resources (1).
- There is minimal, if any, government intervention (1).
- Economic agents in the market economic system are driven by profits (1).
- The system creates incentives (1), such as higher wages or salaries for those who are more productive (1) or more qualified and skilled (1).
- Markets are competitive (1), as firms strive to maximise their own profits (1).
- There can be rather large inequalities in income and wealth (1), i.e. there is an income and wealth gap between the rich and poor (1).

8 a The market economic system is a type of economic system that relies on the market forces of demand and supply (1) to allocate scarce resources (1) with minimal government intervention (1).

b Analysis of the benefits might include:

- **Efficiency** (1) — competition in the market economic system helps to ensure private individuals and firms pay attention to what customers want (1).
- **Incentive to innovate** (1) — firms have an incentive to spend money on research and development (R&D) in order to gain a competitive advantage (1), thereby creating more innovative products for customers (1).
- **Freedom of choice** (1) — private individuals can choose which goods and services to purchase (1) without being restricted by government regulations and planning (1).
- **Incentives to work** — the profit motive for private sector firms (1) and the possibility for individuals to earn unlimited wealth (1) create incentives to work hard. This helps to boost economic growth (1) and living standards in the country (1).

Analysis of the costs might include:

- **Income and wealth inequalities** (1) — in a market economic system, the rich have far more choice and economic freedom (1), whilst the poor have little access to goods and services (1) or may even be neglected (1).
- **Environmental concerns** (1) — the high level of economic activity in the market economic system (1) depletes the world's scarce resources (1) and creates negative externalities such as pollution and climate change (1).
- **Wasteful competition** (1) — competitive pressures can result in wasteful competitive practices (1), e.g. the excessive use of packaging (1) or advertising clutter, e.g. online marketing spam (1).
- **Exploitation** (1) — the lack of government intervention can result in consumers being exploited (1), perhaps by marketing campaigns (1) or poor quality or safety standards leading to less safe products for consumers (1).

9 In a market economic system, the rich have far more choice and economic freedom (1). This is because the market system produces goods and services only for those who are able and willing to pay (1), thus basic services for the poorer members of society may be neglected (1). By contrast, in the mixed economic system, the government provides the basics, such as state education and healthcare (1), for the general public. Thus, there is greater equality in the mixed economic system (1).

10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Benefits of the market economic system (free market economy) include the following:

- There are incentives for individuals to earn unlimited wealth as the market economy provides almost limitless economic opportunities for those willing to work hard.
- The high level of economic activity creates economic growth and raises living standards for the majority of people in the country.
- There is a greater degree of choice as competition ensures households can choose from different suppliers. Households can also benefit from better-quality products due to the competition that exists in market economies.
- There are greater incentives for firms to be innovative, as private firms have to pay attention to what customers want in order to remain competitive.

However, there are losers in a market economic system (free market economy):

- In a market economic system, the wealthy have far more economic freedom and choice, as they are the ones with the ability and willingness to purchase goods and service from the market system. Hence, the poor suffer from being unable to access goods and services priced through the free market system.
- The high level of economic activity in the market economic system depletes the world's scarce resources, especially non-renewable resources. Future generations are therefore likely to lose out.
- The high level of economic activity also creates negative externalities such as pollution and climate change, thus harming the economic wellbeing of the general public.
- There is generally a higher cost of living in market economies, as competition for resources pushes up prices. This makes it increasingly difficult for many people to sustain a decent standard of living.

Workbook answers

14 Market failure

1 Correct answer: C car parks in a town centre

Car parks are not an example of market failure because car parks and cars are complementary goods, with their demand and supply determined by market forces. Option A is incorrect because the supermarket charges higher prices than if it operated in a competitive market. Options B and D both have impacts on third parties who do not drive cars or produce the air pollution.

2 Correct answer: C public fireworks display

Public fireworks displays are non-rivalrous (observation of the fireworks by a person does not prevent another from doing so) and non-excludable (it is impossible to exclude anybody from watching the fireworks). Options A and B are excludable and rivalrous and option D is non-excludable but rivalrous.

3 Correct answer: B external costs, external benefits, opportunity cost

Air and road traffic are external costs. Trade, tourism and business opportunities are external benefits and the government's decision to build another airport terminal has an opportunity cost because the money could have been spent on other projects.

4 Correct answer: A over-provided

Merit goods, such as education and healthcare, would be under-provided and under-consumed if they were provided only by the private sector. Merit goods provide social benefits as they provide external benefits to society.

5 Correct answer: D new public housing funded by the government

Public housing funded by the government is an example of public expenditure and provides private benefits to those who are given public housing to live in. Options A, B and C all provide external benefits to society. In Option A, people are trained and educated, so they become more occupationally mobile, thus benefiting firms. They may also train others, thus increasing the skills of a larger pool of workers. Option B provides leisure facilities and a source of education for citizens, and is thus of benefit to the general public. Option C provides the public with a park to enjoy and the plants and green space improve the natural environment.

6 Examples of goods/services provided by a government include:

- healthcare (1)
- education (1)
- public libraries (1)
- parks (1)
- museums (1)
- roads (1)
- refuse/garbage collection (1)

7 Explanations of external costs/negative externalities might include:

- The casinos provide more opportunities for people to gamble, drink alcohol and smoke (1) and the over-consumption of these activities has negative effects on society (1), e.g. an increase in debt and health problems (1).
- The construction of the casinos and hotels has resulted in the loss of vegetation and green spaces (1), which has spoiled the landscape and natural beauty of Macau (1) and the quality of life (1) for the people living there.
- The local culture has been lost with the establishment of a casino culture (1), which has a negative effect on the culture and society of Macau as it loses its unique traditions and identity (1).
- The casinos and hotels increase traffic in the area (1), causing congestion and greater noise and air pollution (1), which negatively affects the quality of life for people living in Macau (1).

Explanations of external benefits/positive externalities might include:

- The casino and hotels create employment opportunities providing income for workers (1) who then spend the income in other businesses (1).
- Higher tax revenues can be raised (1), which may result in a greater provision of public and merit goods for citizens of Macau (1)
- The development of the casinos and hotels is a sign of economic growth (1), which may lead to increased standards of living for citizens in Macau (1).

8 The private sector fails to provide certain goods and services due to a lack of a profit motive (1) and such goods and services are known as public goods. Public goods are non-excludable and non-rivalrous in consumption (1). This means those who do not pay can still enjoy access to the product and there is no competition to purchase or use the product (1).

9 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Social costs of the dam include:

- loss of land and damage to the environment caused by the construction of the dam
- displacement and reallocation of over 1 million people, causing disruption to their lives and livelihood
- loss of cultures of local villages and towns

Social benefits of the dam include:

- producer of a large amount of hydroelectric power which may lower costs and produce a reliable energy supply
- creation of jobs for the construction and management of the project

Conclusion: Although the construction of the dam has created jobs and may provide an efficient source of electricity, the social costs may outweigh the social benefits because of the disruption to people through loss of their homes and livelihoods and the damage to the natural environment.

- 10 a** Social benefits are the true (or full) benefits of consumption or production, i.e. the sum of private benefits and external benefits (1). For example, university education can lead to increased productivity of the workforce due to increased skills and knowledge (greater human capital) (1). If left to the choice of individual, university education could be under-consumed due to the costs charged (1). Funding therefore has benefits for the individual and for the productivity of the workforce (1).
- b** Explanations might include:
- There is no opportunity cost incurred by the government (1) as people are responsible for the private costs of their own education (1).
 - People are more likely to study hard (1) because they are paying for their education (1).
- c** Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Benefits of subsidising university education include the following:

- More people will go to university and therefore society will gain from higher skilled workforce.
- Subsidies will allow students from low-income backgrounds to attend university and therefore a greater proportion of society will be able to access education.
- Subsidies redistribute income within a society as they enable students from low-income backgrounds to experience a university education.
- Universities may close if there is a lack of students.

Costs of subsidising university education:

- There is an opportunity cost as the money spent on subsidies could be spent on something else.
- Students may go to university but drop out before the end of the course, wasting resources.
- Students may not have an incentive to work hard because they are not paying for the course.

Workbook answers

15 Mixed economic system

1 Correct answer: D mixed economy

As the name suggests, the mixed economy is an economic system that combines elements of both the planned economy and the market economy.

2 Correct answer: D minimum price

A minimum price is one that is set above the market equilibrium price. This helps to create an incentive for firms to supply this product because the price is set higher than it would be in a market economy.

3 Correct answer: D planned economy

In a planned economy, the government oversees production decisions (what, how and for whom production should take place).

4 Correct answer: C maximum price

Price controls are used to ensure that market prices do not escalate beyond control, which would prevent the majority of people from accessing the good or service. Hence, the price is set at a maximum, i.e. firms cannot charge more than the maximum price.

5 Correct answer: C subsidies

The provision of government subsidies helps to reduce the costs of production. The subsidies help firms to supply more of these goods and services, and to charge a lower price.

6 Privatisation is the transfer of ownership of assets from the public sector to the private sector (1). Examples could include utilities boards (1), public-sector housing (1) and state-owned enterprises, such as the Post Office or a broadcasting station (1), all being sold off to the private sector.

7 Features of a planned economic system include the following:

- Production decisions are made by the government (1), i.e. the state decides on what, how and for whom production should take place (1).
- Production schedules are devised on a long-term basis (1) to ensure output of products deemed to be necessary by the government (1).
- Wage differentials are minimal (1), meaning there is greater equality in income and wealth (1).
- The economy prefers to be self-sufficient (1) rather than rely on trade negotiations with other countries (1).

8 a A mixed economy is a combination of both planned economies (1) and market economies (1).

b Analysis might include:

- There may be a misallocation of resources in a free market economy (1), such as the under-provision of merit goods (1) and public goods (1), and negative externalities such as pollution (1).

- There is a need for government intervention in the economy (1) for numerous reasons, such as environmental protection (1) and to redistribute income and wealth using the tax system (1).
 - Government intervention is also required to regulate and control the activities of private sector firms in mixed economies (1). For example, government intervention is required to enforce employment rights (1) and prevent anti-competitive business activities (1).
- 9 A planned economic system ensures basic needs (1) are met for everyone in the economy (1). This helps to achieve greater equality in income and wealth distribution (1). By contrast, in market economies, production is disproportionately geared towards those with high incomes and wealth (1), i.e. those with the ability and willingness to pay higher prices.
- 10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Arguments in favour of the (free) market economy include:

- greater efficiency and productivity, which can lead to more economic growth, job creation and economic prosperity for many people
- freedom of choice, such as customers being able to choose between different types of smartphone, or people being able to choose their own career paths
- more competition, which can benefit the public as the rivalry between firms is likely to improve customer service and generate better-quality products
- incentives to work hard, due to the limitless economic opportunities available

Possible disadvantages of a (free) market system include:

- environmental issues and concerns about the depletion of the earth's scarce resources, and the intensity of consumption and economic activity
- income and wealth inequalities, which result in the rich getting richer and the poor getting poorer

- social hardships for those who are unable to secure well-paid jobs or those who are unable to work, such as unskilled or uneducated people or those with physical disabilities
- the existence of unregulated monopolies, which are able to exploit customers by restricting output and/or charging higher prices

Workbook answers

16 Money and banking

1 Correct answer: A durability

Durability is a characteristic of money, not a function of money. The four functions of money are: unit of account, store of value, medium of exchange and standard for deferred payment.

2 Correct answer: D the need for trade and exchange

Bartering (swapping) enables trade and exchange to take place in the absence of money. Options A, B and C are problems associated with bartering.

3 Correct answer: A the facilitation of company growth

The central bank is not involved with commercial lending of money to facilitate the growth of companies — this is the role of commercial banks.

4 Correct answer: D offering internet banking

The other options are primary functions of commercial banks.

5 Correct answer: C lender of the last resort and bankers' bank

Options A, B and D are all functions of a commercial bank. Option C is a function of a central bank.

6 Money is any commodity (1) that can be used as a medium of exchange that is accepted for the purchase of goods and services (1). It must therefore be acceptable (1), durable (1), divisible (1) and recognisable (1).

7 Explanations might include:

- Banknotes and coins are durable (1) — made of paper and metal, they are long-lasting and easily replaceable if worn (1). Modern-day banknotes are made from polymer rather than paper and are significantly more durable (1).
- They are portable (1) — they weigh very little and people can carry them conveniently (1).
- They are scarce (1) — the supply of money, including banknotes and coins is regulated by a country's central bank (1) so that the money retains its value over time by being relatively scarce (1).
- They are acceptable (as legal tender) (1) — money is widely recognised and accepted as a medium of payment for goods and services (1).
- They are divisible (1) — as money is a measure of the value of goods and services, it must be divisible (1). Banknotes and coins are divisible unlike previous forms of money such as cattle (1).
- They are uniform (1) — for money to be easily recognisable there must be uniformity, for example all \$50 banknotes will look identical in terms of shape, size and design (1).

8 Explanations might include:

- A central bank is the sole issuer of bank notes and coins in the country (1). This helps to bring uniformity to and improves public confidence in the country's monetary system (1).

- It acts as the government's bank (1) by maintaining the bank accounts of the central government (1) such as receiving deposits from government (1), making short-term loans to the government (1) and making payments for items of government expenditure (1).
- It acts as the bankers' bank (1), for example overseeing the cash reserves of the commercial banks enabling them to function more efficiently (1).
- It has responsibility for overseeing the country's monetary policies (1), such as managing the public sector debt (1) and representing the government in international financial markets such as foreign exchange (1).
- It is the lender of last resort (1). For example, if a commercial bank faces temporary financial difficulties, it can seek financial assistance from the central bank (1). This helps to ensure the commercial bank does not collapse (1), protects jobs and safeguards the nation's banking system and economic welfare (1).

9 Explanations might include:

- Commercial banks accept banks deposits of money and savings from their customers (1), which can be used to earn interest (1) or for a customer's convenience in their own financial operations such as paying suppliers or employees (1).
- They make advances, i.e. provide personal and commercial loans to their customers (1), which include overdrafts and mortgages (1).
- They are involved in credit creation (1), the process by which banks increase the money supply in an economy by making money available to borrowers (1). This includes providing overdraft facilities and credit card facilities (1).
- They provide financial services to their customers (1), such as:
 - collecting and clearing cheques (1)
 - providing financial advice, e.g. tax, savings and retirement plans (1)
 - helping customers to buy and sell shares (1)
 - providing bureau de change facilities for foreign exchange (1)
 - storing valuables in safe deposit boxes in bank vaults (1)
 - internet banking facilities (1)

10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Why payment apps are a new form of money:

- Payment apps transfer money from buyers to the sellers in return for a good or service and therefore perform the same function as a credit card, debit card or cheque. The apps connect to a buyer's debit or credit card and payment is made, and therefore they act as a medium of exchange.

Why payment apps are not a new form of money:

- Payment apps cannot carry out the four functions of money. They can act as a medium of exchange but are not accepted by all sellers. Some apps act as a store of value and have a digital wallet; others do not and therefore all apps do not act as a store of value. Payment apps are not a method of deferred payment or a unit of account.
- The payment apps do not have all the characteristics of money. Apps are durable and portable because they exist on a smartphone. Uniformity, divisibility and scarcity are not characteristics of the app. They are acceptable to some sellers.

The number of sellers that accept payment by apps will probably increase in the future.

Payment apps may become more widespread in the future.

Workbook answers

17 Households

1 Correct answer: D wages and salaries

Most people supply their labour services in return for income in the form of wages and salaries.

2 Correct answer: A disposable income

Disposable income refers to earnings after income tax and other charges. This is the income at an individual's disposal that can be spent.

3 Correct answer: C current expenditure

Current expenditure refers to the spending on goods and services within the next 12 months (the current year).

4 Correct answer: B conspicuous consumption

Conspicuous consumption is the spending on expensive, luxury goods and services due to the desire to have greater social status.

5 Correct answer: D trade policies

Trade policies are likely to be concerned with which goods and services are allowed to be sold in the country, so are unlikely to influence directly the level of spending, savings and borrowing in the economy.

6 The wealth of an individual is measured by the amount of assets they own (1) minus their liabilities (the amount they owe) (1). Wealth is accumulated over time (1).

7 Possible factors include:

- interest rates (1)
- consumer confidence levels (1)
- the rate of inflation (1)
- the age of a person (1)
- the size of households (1)

8 Explanations might include:

- to fund the purchase of expensive products (1), such as a foreign holiday, a sports car (1) or university education (1)
- to purchase property or land (1), either for production purposes (1) or as an investment (1)
- to start up a new business (1) as the owner does not have enough savings of his/her own (1)
- to fund growth of a business (1), such as setting up production facilities in a foreign country (1)

9 In general, higher interest rates encourage people to save more (1), thereby meaning they have less money to spend (1). Higher interest rates also discourage borrowing (1), so spending is likely to fall as people do not have the funds to purchase expensive items in particular (1). The opposite would apply to a cut in interest rates.

- 10** Direct taxes are imposed on incomes and earnings (1) so high rates of income tax will reduce people's disposable incomes (1), meaning they have less money to save (1). Having less income after tax also results in less spending in the economy (1). Hence, there is a negative relationship or correlation between the rate of income tax and the amount of saving and spending in the economy (1).

Workbook answers

18 Workers

- 1 Correct answer: B** Some professional footballers have a unique set of skills and talent.

Some professional footballers are rewarded because of their superior talent and skills. Option A is also incorrect because, although football is seasonal, this is not considered when deciding upon salaries. Option C is incorrect because football is not a dangerous profession. Option D is incorrect because the relatively short working life of a footballer is not considered when deciding on their salary.

- 2 Correct answer: B** greater job security and pension

Public sector jobs tend to offer greater job security and a pension after retirement (although due to public sector budget cuts in many countries this may change in the future). Options A, C and D are all advantages of working in the private sector.

- 3 Correct answer: D** unemployed workers have a greater incentive to work

Unemployed workers may have a greater incentive to seek work, i.e. an increase in the NMW makes work more attractive. Option A is an advantage to firms, whilst Option C is an advantage for the government. Option B is a possible advantage to individual firms and to the economy in general as national output should increase.

- 4 Correct answer: A** A larger number of women work part-time or work flexible working hours.

Some women work part-time or flexible hours to fit in with childcare or to look after relatives and therefore their wages tend to be lower on average. Options B, C and D are all reasons why women can earn similar wages to men.

- 5 Correct answer: A** the production process may become dependent upon a particular worker

If a production process becomes too dependent upon a particular worker and the worker leaves the firm, or is absent from work, then the production process will slow down and productivity will fall. Options B, C and D are all advantages of specialisation of labour to a firm.

- 6** Explanations might include:

- Career prospects (1) — a job may provide opportunities for progression/advancement (1), or a person may have to change jobs to be promoted (1).
- Level of education required (1) — some jobs require only minimal education, e.g. labouring, factory work (1), while other jobs require post-graduate levels of education, e.g. university professors, architects and dentists (1).
- Length of training required (1) — jobs such as cleaning or shop work require few skills (1), while other jobs such as engineers, pilots, lawyers and accountants require many years of training (1).
- Level of danger involved (1) — some jobs involve a high degree of risk (1), e.g. the fire service, window cleaning, erecting scaffolding, while others involve little risk, e.g. office-based jobs (1).
- Level of challenge (1) — some jobs are repetitive and boring (1) with low levels of responsibility (1) while others require thinking skills and a greater level of responsibility (1).

- Personal satisfaction gained from the job (1) — the degree of job satisfaction will influence how long a person stays in a job (1), e.g. if a worker feels happy or respected for what they do, they may be motivated to work harder (1).

7 Explanations might include:

- The provision of training and education (1) for workers to increase their skills and enable them to develop new ones (1).
- The introduction of a national minimum wage (NMW) (1) or an increase in the NMW (1) to encourage more people to join the workforce (1).
- Lowering welfare payments to the unemployed (1) in order to encourage them to join the workforce instead (1).
- Increasing the retirement age (1) to increase the number of people in the workforce (1).
- Providing childcare facilities (1) to encourage more women to join the workforce (1).

8 Explanations might include:

- Earnings rise with experience (1) and therefore people aged 35–44 years typically earn significantly more than those aged 20–24 years (1), as shown in the table.
- People tend to reach the peak of their career in their mid-40s (1) and their wages tend to stay the same after that time. This might be due to lifestyle choices as younger people tend to be more ambitious (1), whereas those near retirement age do not want/need to work at such a fast, competitive pace (1).
- People tend to retire at or around 65 years old (1), so their earnings fall when they reach this age (1), as shown in the table.

9 Analysis of factors that might affect the demand for labour might include:

- The number of tourists (1) visiting Koh Lanta, as this will impact upon the number of workers required (1) to work in the hotel and tourism industries.
- Income levels in the rest of the world (1), which will impact upon the number of tourists visiting Thailand (1) — low incomes (perhaps due to a global recession) would suggest fewer overseas trips to places like Koh Lanta (1), thus negatively impacting the demand for labour (1).
- The cost of labour in Koh Lanta (1) — if the cost of labour is low compared to other capital inputs, more people will be employed in the tourism industry and vice versa (1).
- The productivity of workers (1) — as workers increase their productivity, e.g. through training (1), the demand for labour will be less as the output for each worker is greater (1).

Analysis of factors that might affect the supply of labour might include:

- The average wages and fringe benefits (1) that can be earned in the tourism industry as compared to other occupations and industries (1).
- The labour participation rate (1) in Koh Lanta or Thailand, e.g. the number of women in the workforce (1), the retirement age (1), the school leaving age (1) and the number of full- and part-time workers in the workforce (1).
- The availability of welfare benefits (1) in Koh Lanta, as it may prove more attractive for some people to claim welfare benefits rather than to work (1).
- The availability of alternative work in Koh Lanta outside of the tourism industry (1).

- The seasonal nature of the work — this might not appeal to some workers (1) because they need/want to find full-time employment rather than seasonal work in the tourism industry (1). These workers might move to other parts of Thailand to find work, thereby reducing the supply of labour in Koh Lanta (1).

10 Analysis of the advantages might include:

- Frederica becomes an expert in knitting (1) and therefore is more efficient and productive (1).
- The quality of her work may increase (1) and her expertise may gain her a reputation (1) for producing hand-knitted garments, so her work may be in great demand (1).
- Her potential earnings may increase (1) as a result of the above.

Analysis of the disadvantages might include:

- The work may become repetitive and boring (1) for Frederica and she may become demotivated, and her productivity may drop (1).
- She may become too specialised (1) and dependent on knitting, and if demand for hand-knitted garments decreases, she will earn less income (1).
- She may lose skills or be unable to develop skills in other areas (1) and lack flexibility in her work (1).

Workbook answers

19 Trade unions

- 1 Correct answer: C** there is high demand for toys produced in the factory

If there is high demand for toys produced in the factory then there will be a demand for workers to make the toys, so a pay rise may be justified. Option A is incorrect because if workers become less productive there is little justification to increase their wages. Option B is incorrect because if there are a large number of people willing to work in the factory, the labour supply is high, so there is no need to increase wages to keep people in the job. Option D is also incorrect because if inflation is low in an economy then it may be difficult for the trade union to negotiate a pay rise to cover the increased cost of living.

- 2 Correct answer: A** a higher rate of inflation

A higher rate of inflation will reduce the value of workers' wages in real terms and a trade union may ask for a wage rise to make sure that the wages increase alongside inflation. Option B suggests that there are surplus workers in the labour market willing to work; hence higher wages cannot be justified. Option C is incorrect because lower productivity would increase production costs to a firm, so higher pay would not be justified. Option D is incorrect because lower profits in an industry will not justify a wage increase.

- 3 Correct answer: D** work-to-rule

Options A, B and C are not examples of industrial action.

- 4 Correct answer: D** improve pay and working conditions for its members

Options A and B occur if negotiations do not bring about satisfactory solutions to work-related disputes and discussions. A trade union may call its members out on strike and may cause disruption to an economy, but these are not aims of a trade union. Option C is incorrect because, although action from trade unions may increase publicity for their members, it is not their main aim.

- 5 Correct answer: D** work-to-rule

In a work-to-rule, workers are working to the 'rules' of their contract. They are not committing any offences and therefore cannot face disciplinary action. Options A, B and C are all other forms of industrial action.

- 6** Collective bargaining is the process between members of a trade union (who elect a representative to meet with the management representatives of the firm or leaders of the industry) to negotiate improved terms and working conditions (1) on behalf of the members of the union (1). A collective voice is more powerful than each worker negotiating individually with an employer (1).

7 Reasons might include:

- Changes to legislation have reduced the powers of trade unions (1) so fewer people may have joined (1).
- Some people have a negative view of trade unions (1) and therefore have not become members (1).
- There has been a decline in the manufacturing industry (1), which was typically unionised (a job or trade which has a trade union to represent workers) (1).
- There has been an increase in employment in jobs that are not unionised (1) (a job or trade which has a trade union to represent workers), e.g. jobs in the retail sector (shop workers), office work, employment in small businesses (such as hairdressers) and independent shops.
- There has been an increase in part-time employment (1).
- There has been an increase in employment in professional jobs (1), which typically do not have a trade union as they are managed by professional organisations (1).
- Loss of jobs in the public sector (1), which is unionised, may have led to lower membership.

8 Explanations might include:

- More people are entering the workforce (1) so an increasing number of workers are likely to join a trade union (1).
- A large number of people are in low-paid jobs with poor working conditions (1), so union membership becomes more desirable (1).
- There are more people on flexible and part-time contracts (1) who require protection from a trade union (1).
- There is an increase in the wealth gap (the gap between rich and poor) (1), so people wish to attempt to achieve better pay and working conditions through union membership (1).

9 Functions include:

- Bargaining with employers (1) for pay rises and better terms and conditions of employment for their members (1).
- Ensuring equipment at work is safe to use (supported by health and safety legislation) (1) and that workers are given sufficient training to enable them to perform their role at work safely (1).
- Giving support to members (1) when they are made redundant (1).
- Providing financial and legal support (1) to workers who may have been unfairly dismissed or disciplined (1).
- Persuading the government to pass legislation in favour of workers (1), such as legislation covering minimum wages, maximum working hours, health and safety, pension rights and the retirement age (1).

10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
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1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Benefits of trade unions to an economy include the following:

- Better pay and working conditions for workers may lead to improved efficiency and higher productivity in the economy.
- Trade unions provide a channel of communication between employees, employers and governments, and this may lead to better relationships between these parties. This helps to improve motivation and to reduce absenteeism at work, thus benefiting the whole economy.
- If trade unions negotiate a higher minimum wage then more people may be encouraged to work and the unemployment rate may fall.

Costs of trade unions to an economy include the following:

- Trade unions tend to ask for higher pay and better working conditions, which will increase costs to businesses, so fewer workers may be employed.
- Industrial action brought about by trade unions may cause disruption to the economy because of more working days lost or fewer hours worked.

Workbook answers

20 Firms

1 Correct answer: D tertiary

The tertiary sector of the economy includes firms that provide services to the general public and other firms.

2 Correct answer: A costs of production

Costs of production are not used to measure the size of a firm. In general, the larger the market share, sales revenue and number of employees, the larger the firm tends to be.

3 Correct answer: C opportunities to gain economies of scale

Only large firms have opportunities to gain economies of scale (cost savings from being able to operate on a larger scale).

4 Correct answer: D organic

When firms expand using their own resources, this is known as organic or internal growth.

5 Correct answer: A external

External economies of scale arise due to the location of the firm, so are enjoyed by all firms in the same industry. By contrast, internal economies of scale (Option C) are gained by the firm itself, rather than the industry as a whole.

6 Diseconomies of scale occur when average costs of production start to increase (1) as the size of a firm increases (1). Hence, the disadvantages of growth start to outweigh the advantages (1).

7 Examples of external economies of scale include:

- availability of skilled labour (1)
- the reputation of the geographical area (1)
- access to transportation networks (1)
- proximity to related firms (1)

8 A franchise involves a person or business buying a licence (1) to trade using another firm's name (1), logos (1), brands (1) and trademarks (1).

9 A backward vertical merger occurs when a firm merges with another firm at an earlier stage of production (1), such as when a firm from the tertiary industry merges with a firm operating in the secondary or primary sector (1).

A forward vertical merger occurs when a firm from the primary sector merges with a firm in the secondary or tertiary sector (1), or when a firm from the secondary sector of industry merges with a firm operating in the tertiary sector (1).

10 Explanations might include:

- Small firms have limited start-up capital (1), which makes it difficult to raise finance to compete (1).
- Small firms have the largest risk of business failure (1), as they face intense competition from the vast number of other small firms that exist (1).

- The presence and intensity of competition from larger and more established firms (1) often poses a huge challenge for the survival of smaller firms (1).
- Small business owners suffer high workload and stress levels (1) as they often have to do everything on their own (1).
- Small firms often suffer from a lack of continuity (1), so the running of the business can be jeopardised if the owner is not there (1), perhaps due to illness.
- Small firms have higher unit costs of production (1) as they are unable to benefit from economies of scale (1), so this limits their competitiveness and profits (1).

Workbook answers

21 Firms and production

1 Correct answer: D money

The four factors of production are land, labour, capital and enterprise. Money is an example of capital (man-made goods used to produce other goods and services). Other examples include tools, machinery, vehicles, computers, factories and roads.

2 Correct answer: C carbonated soft drinks

Labour-intensive production requires spending proportionately more on labour than any other factor of production. Options A, B and D require intensive use of labour, whereas Option C relies on capital-intensive technologies for mass production.

3 Correct answer: D productivity

Productivity measures how well resources are used in the production process, e.g. labour productivity measures the efficiency of the workforce in terms of output per worker.

4 Correct answer: C innovation

Innovations such as tablet computers and smartphones have transformed the way many people work, for example. Innovation is an important source of productivity.

5 Correct answer: B derived demand

Factors of production are demanded for their use in the production process of creating output of goods and services. The demand for these goods and services determines the demand for the factors of production needed.

6 Capital-intensive production refers to a firm using and spending proportionately more money on capital (1) than any other factor of production (1).

7 Derived demand means demand for any factor of production is dependent on the demand for the goods and services that they are used to produce (1), rather than being demanded for itself (1). For example, bakers are demanded for the bread they bake (1), not for the sake of hiring bakers.

8 Productivity is a measure of how well resources are used in the production process (1). Investment expenditure, such as automation or more capital-intensive technologies (1), helps to improve the productivity of resources such as labour (1). For example, internet technologies have raised the productivity of workers in multiple industries that are able to use e-commerce (1).

9 a Monthly sales per worker at Morganics Cars = $\$284,850 \div 5 = \$56,970$ (1)

Monthly sales per worker at Agent Cars = $\$366,440 \div 8 = \$45,805$ (1)

b The sales team at Morganics Cars is more productive (1) as the average sales person sells an extra \$11,165 worth of cars (1).

c Although Morganics Cars has higher productivity as measured by monthly sales per worker (1), Agent Cars might be considered to be more productive as each sales person sold a greater number of cars (1) in the same time period:

- Morganics Cars sold an average of 3 cars per worker (15 cars sold between 5 sales staff) (1).

- Agent Cars sold an average of around 3.75 cars in the same time period (30 cars sold between 8 sales staff) (1).

Hence Agent Cars sold more cars per worker.

Also, the data do not provide any information on the typical price of the cars being sold, e.g. Morganics Cars have an average price of \$18,990 ($\$284,850 \div 15$) compared to Agent Cars' average price of \$12,214.67 ($366,440 \div 30$), which might explain Morganics' higher sales revenue per worker (1).

Thus, the choice of measurement of productivity (1) can determine how efficient these firms are interpreted to be.

10 Explanations might include:

- A lack of productivity causes average costs to rise (1) and thus reduces the competitiveness (1), profitability (1) and chances of survival of the firm (1).
- High productivity helps firms to achieve economies of scale (1), further improving their competitiveness (1), profitability and chances of survival (1).

Workbook answers

22 Firms' costs, revenue and objectives

1 Correct answer: C rental payments

Irrespective of the level of output, the manufacturer has to pay rent for the land and/or building in which it operates. Electricity charges, overtime pay and wages are all dependent on the level of output, so are classified as variable costs.

2 Correct answer: B fixed

Fixed costs are those that have to be paid regardless of the firm's output or sales level. See page 155 in the textbook for an explanation of fixed costs.

3 Correct answer: C total costs

Total costs consist of both fixed and variable costs. So, the total cost = fixed costs when there is no output (meaning there are no variable costs of production). Hence, the total cost line intersects the y-axis at the value of the fixed costs.

4 Correct answer: C \$15

$$AC = TC \div Q$$

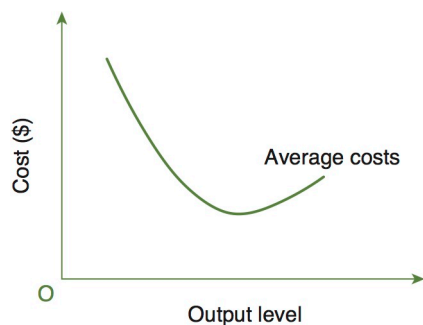
$$AC = (20,000 + 10,000) \div 2000$$

$$AC = \$15$$

5 Correct answer: B revenue

Salaries (Option C) are a form of financial payment to employees. They are a form of income (Option A), the collective term for the earnings of the four factors of production. Total costs (Option D) represent outflow of money from a business, whereas revenue (Option B) represents an inflow of money.

6



(1 mark for each correct label.)

7

Output (units)	Fixed costs (\$)	Variable costs (\$)	Total costs (\$)	Average costs (\$)
100	2000	400	2400	24.00
200	2000	760	2760	13.80
300	2000	1200	3200	10.67
400	2000	2320	4320	10.80

Hence, the output level with the lowest average costs of production is at **300 units of output**, where the average cost = \$10.67.

(1 mark for the working out and 1 mark for the correct answer.)

- 8 a Average cost is calculated by dividing the total cost by the quantity produced.

Quantity produced (units)	20	30	40	50
Total cost (\$)	200	285	360	460
Average cost (\$)	10.0	9.5	9.0	9.2

Hence the level of output required to minimise average costs is **40 units**.

(1 mark for the working out and 1 mark for the correct answer.)

- b Profit is calculated by taking away total costs from total revenue (which is calculated by multiplying the price by the quantity sold), i.e. profit = (price × quantity) – total costs.

Quantity produced (units)	20	30	40	50
Total revenue (\$)	20 × 20 = \$400	20 × 30 = \$600	20 × 40 = \$800	20 × 50 = \$1000
Total cost (\$)	200	285	360	460
Profit (\$)	200	315	440	540

Hence, the level of output required to maximise profits is **50 units**.

(1 mark for the working out and 1 mark for the correct answer.)

- 9 a The price (or average revenue) is calculated by dividing the total revenue by the level of output. For instance, \$4500 is earned from selling 300 tons, so the price is: $4500 \div 300 = \text{\$15 per ton}$.

(1 mark for the working out and 1 mark for the correct answer.)

- b** To calculate average costs, divide total costs by the level of output:

Output (tons)	Total cost (\$)	Average cost (\$)
0	1000	—
100	2000	20
200	2800	14
300	3600	12
400	5200	13

Hence, average costs are minimised at **300 tons of output**.

(1 mark for the working out and 1 mark for the correct answer.)

- c** Profit is calculated by taking away total costs from total revenue:

Output (tons)	Total cost (\$)	Total revenue (\$)	Profit (\$)
0	1000	0	(1000)
100	2000	1500	(500)
200	2800	3000	200
300	3700	4500	800
400	5200	6000	800

(1 mark for the working out and 1 mark for completing the table.)

- 10 a** Total costs = fixed costs + variable costs = \$8000 + (\$3 × 20,500) = **\$69,500**

(1 mark for working out and 1 mark for the correct answer.)

- b** Average costs = total costs / output

$$AC = 69,500 / 20,500 = \mathbf{\$3.39}$$

(1 mark for working out and 1 mark for the correct answer.)

- c** Profit = total revenue – total costs

$$(5.5 \times 25,000) - [(\$3 \times 25,000) + 8000] = \$137,500 - \$83,000 = \mathbf{\$54,500}$$

or

$$[(\$5.5 - \$3) \times 25,000] - \$8000 = \mathbf{\$54,500}$$

(1 mark for working out and 1 mark for the correct answer.)

Workbook answers

23 Market structure

1 Correct answer: A barriers to entry

In a highly competitive market, barriers to entry will be very low and it will be relatively easy for firms to enter and leave the market. Options B, C and D are all characteristics of highly competitive markets.

2 Correct answer: C price taker

A monopolist is a price setter (or maker) because it has significant market power and controls enough of the market supply to enable it to charge higher prices. It is therefore not a price taker. Options A, B and D are all characteristics of a monopoly.

3 Correct answer: A consumer protection laws

Although consumer protection laws need to be observed, these laws apply to all publishers in the industry, not just those attempting to enter the industry. The consumer protection laws are unlikely to be a significant deterrent (barrier).

4 Correct answer: B monopoly

A monopolist is the sole supplier of a particular good or service. Monopolists are price makers, also known as price setters (Options C and D). A market leader (Option A) suggests there are other rivals in the industry. Besides, not all market leaders enjoy monopoly power.

5 Correct answer: D number of price takers and makers

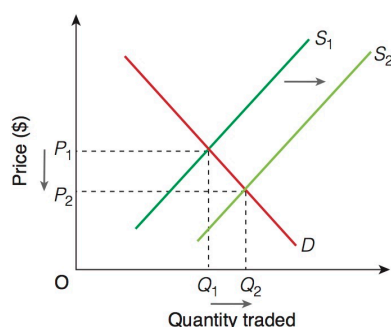
Option D is not a key characteristic of a market because a market will have firms that are either price takers or price makers. Options A, B and C are all key characteristics of a market.

6 Market structure refers to the key characteristics of a particular market (or industry) (1), such as the number and size of firms in the market (1), the degree and intensity of price and non-price competition (1), and the nature of barriers to entry (1).

7 Explanations might include:

- Monopolists can be inefficient (1) in allocating resources. In pursuit of profit they can restrict their range of products and/or charge higher prices (1), which negatively affects consumers (1).
- High barriers to entry can prevent new firms from setting up in the market (1), which reduces the degree of competition in the market (1) and allows monopolists to continue charging higher prices (1).
- Monopolists supply products with few substitutes, therefore demand is price inelastic (1). As monopolists are price makers (1), they can charge higher prices to maximise their profits from the relatively low PED (1).
- Consumers' imperfect knowledge (1) about the products and prices being charged by competitors enables monopolists to maintain market power (1).
- Monopolists have fewer incentives to innovate (1) due to the lack of competition (1).

- 8 Award up to 4 marks for a diagram that shows axes correctly labelled (1), the original demand and supply curves (1), original and new equilibrium price and quantities labelled (1) and a shift to the right of the supply curve (1).



Up to 2 marks for analysis: increased competition shifts the market supply curve outwards to the right (1) as more firms enter the market and the market supply increases (1). This causes the market price to fall from P_1 to P_2 and the equilibrium output to increase from Q_1 to Q_2 (1). The degree to which the supply curve shifts depends on the number of firms entering the market (1).

- 9 Analysis might include:

- A high degree of competition in a market tends to benefit consumers (1). This is because firms have to use non-price methods of competition to attract and retain customers. For example, customers may benefit from higher-quality products (1) and good customer service (1), and competitive firms may introduce promotional strategies, such as loyalty programmes (1), to retain customers.
- In addition, competition brings about greater choice (1) as firms try to differentiate their good or service from those of competitors, higher output (1) and more competitive prices (1).

- 10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Monopolies are always bad for consumers:

- Private sector monopolies may charge higher prices and produce lower output than competitive firms. In their pursuit of profit maximisation, monopolists can restrict the output of a product and/or charge a higher price for it. This creates a loss in the welfare of consumers.
- As there are no substitutes for the products supplied by monopolists, demand is price inelastic. As monopolists are price makers, they can charge higher prices to maximise profit from the relatively low PED.
- High barriers to entry prevent new firms from setting up in the market. This limits the degree of competition, so ensures monopolists can continue to charge relatively high prices.
- Customers and rival firms do not have easy access to information about the products and the prices being charged by competitors. For example, mobile phone network providers use very confusing pricing packages for their services. Similarly, banks offer a variety of interest rate charges for their various types of loan. Imperfect knowledge about prices and products means that consumers and competitors may not necessarily make rational choices.
- Monopolists may have less incentive to innovate than firms in competitive markets. The lack of competitive pressures means that monopolists can become complacent (as there is no need to be worried about competition), rather than focus on innovations to ensure their survival.
- Customer service may be poor as monopolists have no incentive to improve the level of service because they have no competition. For example, a rail company with no competition may provide an unreliable service.

Monopolies are not always bad for consumers:

- As monopolists control market supply, they operate on a very large scale and benefit from huge economies of scale, i.e. lower average costs of production as the scale of output increases. This means monopolists can supply larger quantities of output and at lower prices. Such market power can be a source of international competitiveness against foreign competitors.
- Monopolists have the financial resources to invest in research and development and as a result generate new ideas, products and production processes. Innovation can therefore act as a source of profit and improve the productive capacity of the economy. For example, Apple's innovative products such as the iPhone and iPad have made the company one of the most valuable businesses on the planet.
- Natural monopolies can eliminate wasteful competition in situations where it makes economic sense to have one monopoly supplier in the market. For example, it makes sense to have one provider of postal services in a town, state or country rather than allowing private sector firms to compete to provide such services. This is because profit-seeking firms may not have much of a financial incentive to provide services in remote areas of the country and a single provider can gain huge economies of scale. The same applies to suppliers of water pipes, railway tracks, telephone lines and electricity grids.

Workbook answers

24 The role of government

1 Correct answer: C local government

Local government collects taxes from local communities or municipalities to fund local public services, such as refuse (rubbish) collection, street lighting, local libraries and public parks.

2 Correct answer: D tariffs and excise duties

Tariffs and excise duties are sources of government revenue, rather than uses of government revenue. Tariffs are taxes on imported goods and services. Excise duties are taxes imposed on locally produced products, such as alcohol and tobacco.

3 Correct answer: D trading bloc

A trade bloc is a group of countries that form an agreement to promote free international trade and the free movement of factors of production (such as labour) between member countries.

4 Correct answer: B international government

The Paris Agreement is a treaty (agreement) signed by most governments around the world to protect the natural and ecological environment.

5 Correct answer: D supply-side policies

Supply-side policies, such as education and healthcare, are used to achieve economic growth through increasing the productive capacity of the economy in the long run.

6 Fiscal policy is the use of taxation and government spending (1) to affect macroeconomic objectives (1), such as economic growth and employment (1).

7 The main macroeconomic aims that national governments strive to achieve are:

- stable price levels, i.e. to control inflation (1)
- economic growth (1)
- employment, i.e. low unemployment (1)
- balance of payments equilibrium (1)
- reducing income and wealth inequalities (1)
- protecting the natural and ecological environment (1)

8 Explanations might include:

- To boost economic growth (1) — zero income tax rates lead to higher disposable incomes (1) and hence increased consumption (1) in the economy.
- To increase incentives to work (1) — zero income tax rates make working more attractive (1) as workers retain more of their income (1), leading to increased consumption in the economy (1).
- To encourage risk taking and entrepreneurship (1) — zero income tax rates make it easier for entrepreneurs to start up new businesses (1) as more money of their money is available to invest (1), which boosts economic growth (1).
- To encourage multinational companies to set up business in these countries (1) — MNCs will be able to hire more workers and/or pay existing workers more (1).

9 Explanations might include:

- Government facilitates international trade negotiations on behalf of the country (1), as modern economies need to trade with other countries (1).
- Government intervention might also be required to prevent the country being exploited by other nations (1). Governments can influence this through tariffs and quotas (1).
- The government can promote tourism in the country (1) in order to raise spending in the domestic economy (1), which can have a positive impact on jobs (1).
- The government can work with other governments and international agencies to develop global issues (1), such as trade relations (1), or international standards for the protection of the environment (1).

10 a Explanations might include:

- Cutting direct tax rates would boost demand/spending in the economy (1), which would actually raise more indirect tax revenues for the government (1).
- It would increase incentives to work (1), meaning that more people would be paying income tax (1).
- It would encourage more multinational companies (MNCs) to set up business in these countries (1), which would boost overall tax revenues compared with having fewer MNCs in the country (1).
- It would discourage tax avoidance (1) and/or tax evasion (1), which boosts overall tax revenues (1).

b Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Answers should acknowledge that imposing corporate taxes may discourage some MNCs, but should also consider factors why they might not, such as the following:

- Corporate taxes may still be lower than in other countries.
- Demand in the economy may be increasing, thus creating incentives for MNCs to set up in the country.

- Access to larger consumer markets may offset the impact of corporate taxes.
- There may be government grants, subsidies and other financial incentives to entice MNCs.
- Availability of cheaper and/or more productive labour can also attract MNCs.

Workbook answers

25 The macroeconomic aims of government

1 Correct answer: A economic growth

Economic growth occurs when there is an increase in a country's real GDP over a period of time.

2 Correct answer: C inflation

Inflation is calculated by measuring changes in the average price level of a representative basket of goods and services purchased by a typical household. These items are statistically weighted to form a price index, in order to measure inflation.

3 Correct answer: D inflationary pressures

With higher rates of economic growth, spending in the economy rises, hence creating inflationary pressure in the economy. It is not possible to determine whether the balance of payments will go into deficit (Option A) from the limited information. Economic growth creates employment opportunities (Option B) and the extra spending in the economy generates more tax revenues (Option C).

4 Correct answer: D provision of welfare services

Depending on the economic system in a country, not all governments strive to provide welfare services. In a free market economic system, resources are allocated based on the market forces of demand and supply with minimal government intervention.

5 Correct answer: A investment

Only the government can impose regulations and taxes on private sector firms (Options B and D), and it approves or gives subsidies (Option C) to encourage output. Both public and private sector firms can use investment expenditure to influence output. Hence, investment is not exclusive or explicit to the government.

6 Full employment means that everyone in a country who is willing and able to work (1) has a job (1), i.e. any unemployment that exists is voluntary only (1).

7 Real GDP refers to the value of national income (GDP) (1) adjusted for inflation (1) to reflect the true value of goods and services produced in a given year (1).

8 Over time, as an economy grows, the gap between the rich and poor tends to widen (1), such as earnings of top executives in the corporate world compared to low-income workers earning the minimum wage (1). This causes greater income inequalities in the economy (1), so the government intervenes to redistribute income to low-income households (1) to minimise extreme poverty (1) and raise standards of living (1).

9 Price stability refers to the control of inflation in the economy (1). Low and sustainable rates of inflation are vital in order to achieve stable economic growth (1) and social wellbeing (1). For example, inflation reduces the international competitiveness of a country (1) as its prices will be relatively higher. This will lead to lower export sales (1), thus causing potential job losses (1).

- 10 a** A subsidy is a form of government financial assistance (1) to help cut production costs of domestic firms (1), enabling them to compete against foreign producers (1).
- b** Inflation is the sustained rise in the general level of prices (1) of goods and services over time (1), as measured by a consumer price index (1).
- c** Subsidies help to reduce costs of production (1), thus enabling firms to keep their prices unchanged (1). It might even be possible for firms to pass on some of these cost savings to customers in the form of lower prices (1), thereby curtailing inflation (1).
Diagrammatically, subsidies would cause a rightwards shift of the supply curve for the given products (1), resulting in lower prices (1), and hence reduce inflation (1).

Workbook answers

26 Fiscal policy

1 Correct answer: B direct tax

Direct taxes are imposed on earnings, such as income and profits. Corporate tax (Option A) and income tax (Option C) are examples of direct tax.

2 Correct answer: C reducing taxes and raising government expenditure

To expand (boost) the economy, fiscal policy can be used by reducing taxes (to encourage consumption expenditure) and raising government spending (which fuels economic activity).

3 Correct answer: D reduce taxes and reduce interest rates

By reducing taxes, consumer demand should be encouraged as households have more disposable income. Cutting interest rates also enables households and firms with existing loans to spend more money and encourages new borrowing which also boosts national output and employment. Option A is a supply-side policy.

4 Correct answer: D Lower interest rates increase the spending ability of households and encourage firms to invest more.

Reducing interest rates can indeed create more spending power (as households with existing loans and mortgages have more disposable income), but this is monetary policy. Fiscal policy involves changes to taxes and government expenditure.

5 Correct answer: C when government revenues exceed public expenditure

The government will have a budget surplus if it spends less than the sum of its sources of revenue. Options A and B refer to the balance of payments, not the budget itself.

6 Explanations might include:

- To redistribute income and wealth (1) so that the less privileged have access to basic needs and wants (1), thus raising living standards in the economy (1).
- To reduce or alleviate poverty (1) by spending on welfare benefits for the poor (1) or providing them with basic housing and shelter (1).
- To provide public goods and services (1), such as street lighting, public libraries, schools, hospitals, national parks and affordable housing (1).
- To steer the economy out of recession (1) by increasing government spending in the domestic economy (1).

7 Explanations might include:

- To boost investment expenditure in the economy (1) as firms have more retained profit due to the zero-rate tax (1).
- To encourage multinational companies (1) to set up in these countries due to the absence of taxes on company profits (1).
- To increase incentives to work (1) as firms are able to hire more workers and/or pay existing workers more (1).
- To encourage risk taking and entrepreneurship (1), thereby improving the productive capacity of the economy (1) and enhancing the country's international competitiveness (1).

8 a

Income level (\$)	Tax rate (%)	Amount of tax paid (\$)
\$10,000	0%	First \$10,000 is tax free = \$0
\$10,001–\$50,000	12%	Next \$40,000 is taxed at 12% = \$4800
\$50,001+	17%	Remaining \$30,000 is taxed at 17% = \$5100
Total tax:		\$9900

(1 mark for the correct answer and 1 mark for showing the working out.)

b Average tax rate = total tax ÷ income

$$\$9900 \div \$80,000 = 12.37\%$$

(1 mark for the correct answer and 1 mark for showing the working out.)

9 a Supply-side policies are long-term measures to increase the productive capacity of the economy (1), leading to an outward shift of the production possibility curve (1).

b Analysis might include:

- Fiscal policy can provide incentives to work (1), e.g. lower incomes taxes and lower welfare benefits create incentives for people to work (1).
- It can encourage investment expenditure (1), e.g. lower corporate taxes enable firms to invest more, helping to improve the economy's productive capacity (1).
- Greater government spending on infrastructure (1) would help to attract foreign investment (1) and improve operational efficiency in the economy (1).
- Human capital expenditure on education and training (1) can improve labour productivity (1) and enhance the international competitiveness of the economy (1).

10 a Contractionary fiscal policy is the use of lower government spending (1) and/or higher rates of taxes (1) in order to reduce the level of economic activity (1).

b Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Reasons why raising income taxes is in the best interest of the economy include the following:

- Tax revenues are needed to improve the general welfare of the public.
- Tax revenues are needed to fund government spending on healthcare, infrastructure and national security.
- Without raising income taxes (in the cases of Andorra, Brunei Darussalam, Oman and Qatar), the government would need alternative sources of revenue and/or need to cut its overall level of spending.
- It helps to redistribute income and wealth in the economy, preventing inequalities in income and wealth from widening.

Reasons why raising income taxes is not in the best interest of the economy include the following:

- Raising income tax contracts the economy as households have less disposable income.
- It can create disincentives to work, as people have less disposable income due to the taxes.
- If spending in the economy drops, this could lead to a recession and job losses.
- It can discourage skilled workers from wanting to migrate to countries such as Andorra, Brunei Darussalam, Oman and Qatar for employment purposes.

Workbook answers

27 Monetary policy

1 Correct answer: D the money supply

The money supply refers to the amount of money in the economy at a particular point in time, consisting of coins, bank notes, bank deposits and central bank reserves.

2 Correct answer: C reducing interest rates by increasing the money supply

Increasing the money supply will tend to reduce the rate of interest due to the greater availability of money. This is an example of loose monetary policy, which is used to expand the economy by encouraging borrowing for consumption and investment expenditure.

3 Correct answer: D changes in tax rates

Changes in tax rates are an example of fiscal policy, not monetary policy. Changes in foreign exchange rates, interest rates and the money supply are all examples of monetary policy measures.

4 Correct answer: D lower interest rates

Lower interest rates discourage savings and encourage borrowing by firms and individuals. Hence, these individuals are more likely to spend more, helping to reduce unemployment in the economy.

5 Correct answer: D tight monetary policy

An increase in interest rates is an example of tight monetary policy as it constrains spending in the economy (in order to combat inflationary pressures) by making it more expensive to borrow money.

6 Monetary policy refers to the use of interest rates (1), exchange rates (1) and the money supply (1) to control macroeconomic objectives (1) and to affect the level of economic activity (1).

7 Governments might choose to reduce interest rates in order to boost economic activity (1) by expanding the money supply (1). This makes borrowing more attractive to households and firms (1) during times of high unemployment (1) or an economic recession (1).

8 Explanations might include:

- To reducing interest rates to stimulate the economy (1) during a recession (1) and to avoid high unemployment (1).
- To raise interest rates during a period of economic boom (1) in order to slow down the economy (1) or to prevent inflationary pressures (1).
- To intervene in the foreign exchange market (1) to influence GDP and economic stability (1).

9 The supply side of the economy is concerned with its long-term productive capacity (1). A cut in interest rates makes it more affordable for firms to borrow (1) in order to boost investment in the economy (1). Higher investment expenditure will, in the long run, improve the productive capacity of the economy (1).

10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
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1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

The effectiveness of monetary policy in achieving economic growth depends on several factors, such as:

- the magnitude of the change in interest rates
- other factors affecting economic activity, which is not dependent only on interest rates
- consumer and producer confidence levels, which can make matters less certain or even destabilising for the economy
- the state of the economy, such as the degree of severity of a recession
- time lags following changes in interest rates and changes in the economy
- lower interest rates used to achieve economic growth, which can conflict with other macroeconomic goals, such as inflationary pressures

Workbook answers

28 Supply-side policy

1 Correct answer: B privatisation

Privatisation is a type of supply-side policy (Option D).

2 Correct answer: D reducing taxes and raising government expenditure

Reducing taxes and raising government expenditure are examples of fiscal policy, not supply-side policy.

3 Correct answer: A deregulation

Deregulation refers to the reduction or removal of barriers to entry in order to make markets more competitive and efficient.

4 Correct answer: C labour market reforms

Labour market reforms involve making changes to create more incentives to work, such as reforming welfare benefits or minimum wage laws.

5 Correct answer: D supply-side policies

Supply-side policies are long-term strategies of the government aimed at increasing the productive capacity of the economy by using policies to improve the quality and/or quantity of factors of production.

6 Supply-side policies are long-term strategies aimed at increasing the productive capacity of the economy (1). This helps to raise gross domestic product (1) and create employment opportunities (1). In the long term, supply-side policies also help to improve the competitiveness of the country (1) by investment in education and training, research and development, and infrastructure (1).

7 Explanations might include:

- The government could increase spending on education and training (1), to develop a more knowledgeable workforce with better skills and hence productivity (1), which is likely to improve the productive capacity of the economy (1).
- It could introduce labour market reforms (1) such as reducing or removing the power of trade unions (1), unemployment benefits (1) or minimum wages (1), to promote greater competition by having a more flexible labour market (1).
- It could lower direct taxes (1) to create more incentives to work (1), which will improve the productive capacity of the economy (1)
- It could introduce deregulation (1) to reduce or remove the barriers (1) to entry to make markets more competitive (1).
- It could provide tax incentives to stimulate firms to invest in the economy (1), in order to maximise their profits in the long run (1). Greater investment will lead to more competitive markets (1).
- It could introduce privatisation (1) where state-owned businesses are sold to the private sector so they can be run more efficiently (1), increasing the competitiveness of the economy (1).

8 Explanations might include:

- The government can increase its spending on education and training (1) or research and development (1), which improves the quality of the economy's labour force.
- It can introduce labour market reforms (1), such as deregulating labour union bureaucracies (1), which makes it more efficient for companies to operate (1).
- It could lower corporate taxes (1), which will help companies maximise their profits in the long run (1).
- It could investment in infrastructure (1), allowing firms to benefit from greater operational efficiency (1).

9 Labour market reforms involve making labour markets more flexible (1), in order to achieve greater productivity and efficiency (1). Such reforms stimulate competition (1) through the removal of rigidities and bureaucracies in labour markets (1), e.g. excessive and complex employment legislation (1) or the threat of strike action (1), which would hinder economic efficiency.

10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
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1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Relevant points include the following:

- Supply-side policies can be used to achieve sustainable economic growth and employment by increasing the productive capacity of the economy.
- As supply-side policies increase the productive potential of the economy, they help to prevent the general price level (inflation) from rising beyond control, thereby fostering economic stability.
- By creating incentives to work, supply-side policies can help to reduce income and wealth inequalities (to some extent at least).
- However, supply-side policies take time to reap the benefits. For example, it might take decades for a nation to get the benefits of an improved education system or infrastructure in the country, thus limiting the effectiveness of achieving macroeconomic goals in the short run.

Workbook answers

29 Economic growth

- 1 Correct answer: C** an increase in the productive capacity of an economy

An increase in the productive capacity of the economy enables the country to boost its gross domestic product (GDP), thereby leading to economic growth.

- 2 Correct answer: D** real GDP per capita

Economists use real GDP per capita (calculated as GDP adjusted for inflation, divided by the population size) as a measure of economic growth.

- 3 Correct answer: C** infant mortality rates

With economic growth, standards of living in the country tend to rise, so infant mortality rates will decline. With higher national income, it is likely that the average number of years children attend school will rise, as will employment opportunities and GDP per capita.

- 4 Correct answer: D** resource depletion

With rapid economic growth, there is huge demand for the consumption of the world's scarce resources, i.e. growth is not necessarily sustainable. Whilst costs might increase (Option A), this is not necessarily a problem (not all inflation is harmful). Higher tax revenues (Option B) can be beneficial for the economy. Increased demand for imports (Option C) might not necessarily be a concern, especially if rapid economic growth is fuelled by higher export earnings.

- 5 Correct answer: B** lower government spending

Lowering government spending will tend to decrease economic growth. Increased spending on education (Option A) will lead to more employment opportunities in education in the short run and a more skilled workforce in the long run, both of which will contribute to economic growth. Lower income tax rates (Option C) will increase disposable income and should lead to more spending and therefore to more economic growth. Lower interest rates (Option D) will encourage borrowing, less saving and more spending, and this should also lead to more economic growth.

- 6** A recession occurs in the business cycle (1) when there is a fall in a country's gross domestic product (GDP) for two consecutive quarters (1). A recession is associated with a decline in consumption, investment and net exports (due to falling export earnings) (1).

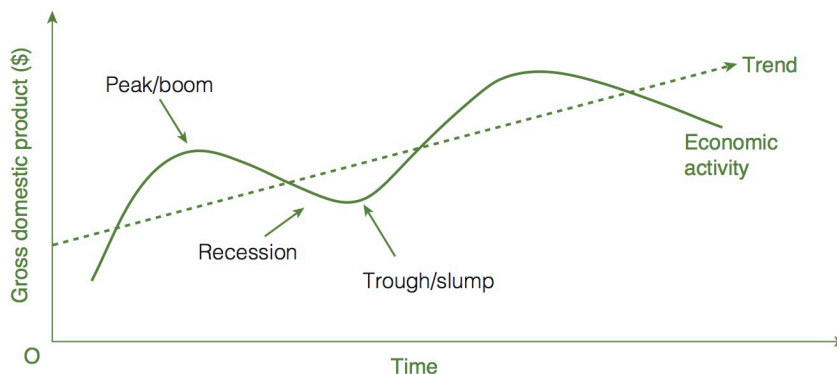
- 7** Net exports are the numerical difference between the value of a country's exports (X) and its imports (M) (1). $X - M$ (1). X measures the monetary value of all goods and services sold to foreign buyers (1), whereas M measures the monetary value of all payments for imported goods and services (1).

- 8** Explanations might include:

- Factor endowments, e.g. natural resources (1). Extraction and exploitation of natural resources will lead to employment opportunities (1) and economic growth (1).
- Size, skills and mobility of the labour force (1). The greater the size and mobility of the labour force, the more productive it is (1), which will lead to economic growth (1).

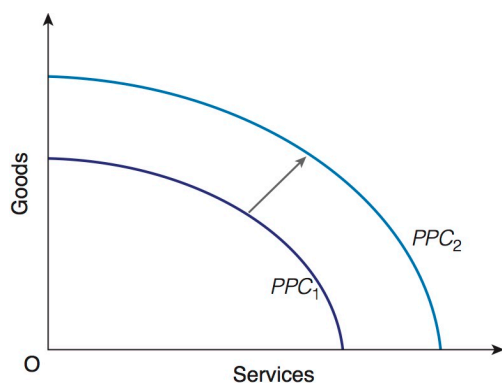
- Labour productivity (1). Higher labour productivity will lower costs for firms and enable them to grow (1). This will lead to employment opportunities and economic growth (1).
- Investment expenditure (1) by firms will lead to employment opportunities and economic growth (1).

9



(1 mark for each correct label.)

- 10 a** An accurately drawn and labelled diagram (1) should show the original PPC (1), a new PPC curve (1), and an outward shift of the PPC curve (from PPC_1 to PPC_2) (1). The PPC has shifted outwards due to the introduction of the internet café (1), which has helped farmers and villagers to increase their productivity (1)



- b** Explanations might include:

- Farmers can get better prices for the produce (1) because they know the market where they can get the best price for their goods (1).
- Farmers can learn new farming techniques (1) to improve yields and cut costs (1).
- Villagers can acquire funding for new and existing businesses (1) which will encourage entrepreneurship (1) and they can purchase capital equipment and machinery (1) to increase output of goods and services (1).
- The internet enables villagers to learn about energy-saving techniques (1) and they can communicate with others and gather new ideas that can lead to increased output in the village (1).

Workbook answers

30 Employment and unemployment

1 Correct answer: B unemployment

In economics, unemployment occurs when people of working age are both able and willing to work but cannot find work.

2 Correct answer: D supply-side policies

Examples of supply-side policies that can rectify labour market imperfections include: investments in education and training, reduction in labour union powers, incentives to seek employment opportunities, and reforms to welfare benefits (such as unemployment benefits).

3 Correct answer: A cyclical unemployment

Cyclical unemployment is associated with an economic recession, which typically affects every industry. Page 211 in the textbook contains a description of the different types and causes of unemployment.

4 Correct answer: A 2.66 million

Unemployment rate = 7%

Working age population = 38 million

Unemployed total = $38\text{m} \times 0.07 = 2.66$ million people

5 Correct answer: B people changing jobs

Frictional unemployment occurs when people change jobs, causing temporary unemployment due to the time delay between leaving a job and finding or starting a new job.

6 The unemployment rate is a measure of the percentage (1) of a country's workforce that is out of employment (1).

7 Unemployment rate = $2.7\text{m} / (30\text{m} + 2.7\text{m}) \times 100 = 8.25\%$

(1 mark for the correct working out and 1 mark for the right answer.)

8 Cyclical unemployment, or demand-deficient unemployment, (1) is associated with a downturn in the economy. This occurs when there is insufficient demand in the economy (1) due to a recession, which affects almost all industries (1).

9 The International Labour Organization (ILO) measures unemployment by calculating the number of people of working age (1) who are both willing and able to work but cannot find employment (1).

10 Explanations might include:

- Greater national output (GDP) (1) — more products can be produced when more people are employed (1).
- Reduced poverty (1) — more people employed means there are less people without an income (1), and more tax revenues can be raised that might be spent on measures to reduce poverty (1)

- Increased tax revenue (from income tax and expenditure taxes) (1) — increased revenues could be spent on further improving the economy (1), e.g. investment in infrastructure or reducing a budget deficit (1).
- Reduced government spending on welfare benefits (1) — a government could use the money saved in this area to increase its spending in other areas (1), or to cut tax rates (1).

Workbook answers

31 Inflation and deflation

1 Correct answer: C lower rates of interest

Lower interest rates will make borrowing cheaper and boost household disposable income (e.g. those with existing bank loans and mortgages pay less interest on their outstanding debts). Thus, consumer and producer confidence levels should rise, causing greater economic activity and an increase in the inflation rate.

2 Correct answer: A Money loses its ability to act as a store of value.

Savers place their money in the bank in an attempt to gain some interest and to keep its value, i.e. to act as a store of value. Inflation reduces the value of money, even if it is placed in a savings account. People are generally less able to save during inflationary periods as they pay higher prices for goods and services.

3 Correct answer: A Food is considered to be more important to the average household than shoes.

Economists consider ‘importance’ to be determined by the percentage of household income spent on particular items, i.e. spending more on food means the typical household values food more than shoes. It is not possible to determine from statistical weights how much (the quantity) households buy (Options C and D) or the price (Option B).

4 Correct answer: A 1.39%

To calculate the rate of inflation, it is necessary to work out the percentage change in the CPI:
 $(116.8 - 115.2) / 115.2 \times 100 = 1.39\%$

5 Correct answer: A Year 1

The data show an overall increase in the CPI, so there has been inflation during the period shown. Prices were lowest in Year 1 when the CPI stood at 102.2 (i.e. 2.2% inflation from the base year), whereas the CPI is higher in all subsequent years. Although the rate of inflation drops from Year 2 to Year 3 (from 104.6 to 103.9), these figures are higher than the CPI in Year 1 (102.2).

6 The inflation rate is calculated by the percentage change in the CPI:

$$[(130.2 - 135.6) / 135.6] \times 100 = -3.98\%$$

(1 mark for the correct working out and 1 mark for the right answer.)

7 Inflation rate = $(121.1 - 125.5) / 125.5 = -3.5\%$

Hence, the price of the basket = $\$1500 \times 0.965 = \1447.50

(1 mark for the correct working out and 1 mark for the right answer.)

8 Explanations might include:

- It can use the CPI as a measure of inflation (1), e.g. where low and stable inflation is a government macroeconomic objective (1).
- It can use the CPI to make international comparisons (1) of inflation rates over time (1).
- It can use the CPI as a basis for interest rate (anti-inflation) policy (1), e.g. raising interest rates when there are inflationary pressures (1).

- 9 Weightings are based on the importance of the item (1) for the average household (1). This is determined by how much of household income consumers spend on the item (1). The greater the proportion spent on an item, the higher its weighting.

Food and furniture are given different weightings as different proportions are spent on them (1) by the average household; a higher proportion of the average household's expenditure goes on food than on furniture (1).

- 10 a A retail prices index is used to calculate the rate of inflation in a country (1). Unlike the CPI, the RPI includes the cost of housing (1), i.e. it includes mortgage interest payments and other housing costs (1). It excludes low-income pensioner households (1) and very high-income households (1), as neither are regarded as being 'average' households in the economy (1).
- b The weight for food is 30 whilst for clothing it is 15 (1), i.e. the typical household spends 30% of its income on food costs, and just 15% on clothing (1). Hence, the average household in Satcolbe spends more money on food than it does on clothing (1).

c

Item	Price index	Weight	Weighted index
Clothing	120	15	$120 \times 0.15 = 18$
Food	130	30	$130 \times 0.3 = 39$
Housing	140	40	$140 \times 0.4 = 56$
Others	125	15	$125 \times 0.15 = 18.75$
Weighted RPI		100	131.75

(1 mark for the correct working out and 1 mark for the right answer.)

Workbook answers

32 Living standards

1 Correct answer: A high cost of living

Those suffering from poverty suffer from high death rates (Option B), homelessness and poor housing (Option C), and hunger (Option D), so these are measures of poverty. Inflation is found in most economies, with many high-income countries experiencing a high cost of living. Hence, a high cost of living is not an indicator of poverty.

2 Correct answer: D It does not reflect the distribution of income and wealth.

Real national income accounts for inflationary effects (Option A) and income earned in each industry (Option B), whilst per capita income accounts for the size of the population (Option C). However, it does not account for the fact that the 'average' person is potentially highly unrepresentative due to inequalities in the distribution of income and wealth. A minority of the population is likely to earn a significant proportion of the country's national income.

3 Correct answer: B environmental issues

Education, healthcare and income are the three indicators used to compile the HDI. The lack of consideration for environmental issues (Option B) is one of the main criticisms of using the HDI to measure standards of living.

4 Correct answer: D Country D

Economists use real GDP per capita as a key indicator of standards of living. This is calculated by dividing the GDP figure by the country's population:

Country	GDP (\$ billion)	Population (million)	GDP per capita (\$)
A	129.7	18.5	7010.81
B	153.6	150.0	1024.00
C	43.2	15.2	2842.10
D	89.9	9.2	9771.74

Country D has the largest GDP per capita (by quite a significant margin compared to Countries B and C).

5 Correct answer: D The definitions of economic development and standards of living are subjective.

Although the statement is correct (that the nature of development and living standards are both subjective), this is not a criticism of using the HDI itself — the statement applies to other measures too, such as GDP per capita. Options A, B and C are direct criticisms of the HDI.

6 Explanations might include:

- Large wage differentials (1) (the difference between the highest and lowest income earners in a country) will result in differences in income distribution, as income is not distributed equally (1).
- Ownership of land and capital (1) by the highest income earners will cause an unequal distribution of income and wealth as high-income earners will earn the majority of the income (1).

- Differences in levels of education (1) will affect income levels as those with higher educational attainment may earn more than those with low educational attainment.
 - There may be unequal distribution of income between genders (1) and minority groups within an economy (1).
- 7** Explanations might include:
- The limited access to and availability of goods and services in Dhaka (1), which may lead to low living standards (1).
 - High crime rates and issues to do with personal safety (1), which may lead to low standards of living (1).
 - Poor infrastructure (1). This may make transport and the movement of people and goods and services difficult (1). Sanitation may be poor and power sources unreliable (1).
- 8** Explanations might include:
- An increase in real GDP per capita may not result in a rise in living standards because the increase may be earned by those on higher incomes (1) and therefore increase the income gap (1).
 - The increase may be due to the production of weapons (1), which will not result in an increase in living standards (1).
 - The increase may have caused an increase in pollution (1) and therefore damage to the environment (1), which will not improve living standards.
- 9 a** Living standards refer to the social and economic wellbeing of individuals (1) in a country at a particular point in time. In economics, this is often based on real GDP per capita (1), indicating the amount of income with which the average person can consume goods and services over a period of time (1).
- b** Analysis might include:
- Lower rates of income tax/expenditure taxes (1). This would increase disposable income (1), and people would be able to spend more on goods and services (1).
 - Lower interest rates should encourage more spending (1) because borrowing is cheaper (1) and people may be paying less on existing loan repayments (1). This will enable people to consume more goods and services (1).
 - Increased government spending on merit goods and public goods (1) will mean that there is an improvement (1) in the provision of, for example, healthcare, education and housing (1), which would improve living standards.
- c** Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

In general, economic growth in a country results in higher living standards for its people. Reasons include:

- higher real GDP per capita
- provision of education, healthcare and housing
- education enabling people to escape poverty

However, other considerations linked to living standards include:

- what type of goods and services are being produced, e.g. healthcare products or arms and weapons
- whether longer working hours caused the increase in national income
- whether working conditions and terms of employment (such as women's rights in the workplace) are improving
- whether the size of the informal sector has increased
- how the extra national income is distributed
- whether higher economic growth is causing greater levels of pollution and other forms of environmental damage
- how much of the additional national income is spent or saved

10 Use the table below to assign marks.

Level	Description	Mark
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1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Living standards refer to the social and economic wellbeing of individuals in a country at a point in time. Various indicators can be used to measure the standards of living in a country. These include:

- GDP per capita. Both countries have low GDP per capita figures; Guineans live on a basic \$1.39 per day, whereas Sierra Leoneans live on just over \$1.36 per day, so there is virtually no difference in their living standards based on GDP per capita.
- Life expectancy. Guineans live 8 years longer on average. This suggests the country has a higher living standard, perhaps through better healthcare provision and/or healthier diets.
- Adult literacy rate. Sierra Leone has higher expected years of schooling and mean years of schooling, suggesting higher living standards, mainly due to better access to an education system. The difference, however, is fairly minimal as there is only 0.5 years' difference in expected years of schooling and 0.7 years' difference in mean years of schooling.

It is difficult to be definitive about which country has the lowest living standards, given the limited data.

There is no reference to the number of people in the population or income distribution within each country.

It is also difficult to collect accurate data, especially in less economically developed countries, so the data may be inaccurate.

Workbook answers

33 Poverty

1 Correct answer: D unemployment

Unemployment is not necessarily an indicator of poverty, but can be a cause of poverty.

Poverty exists when people lack adequate income (Option C) and wealth to sustain a basic standard of living (Options A and B).

2 Correct answer: A absolute poverty

In measuring extreme poverty, the most common income threshold, set by the World Bank, is \$1.25 a day.

3 Correct answer: D relative poverty

Relative poverty measures the extent to which a person's financial resources fall below the average income for the population.

4 Correct answer: B reduce, reuse, recycle

The UN's Sustainable Development Goals (SDGs) consist of 17 international development goals to end poverty by 2030. Option B (reduce, reuse, recycle) is not one of these SDGs, but is a possible strategy to achieve the goals.

5 Correct answer: B high rates of tax

High rates of tax tend to be used to redistribute income and wealth, rather than causing poverty.

6 Relative poverty is a comparative measure of poverty (1), referring to those who have a lower standard of living in comparison to the average member of society (1), e.g. on low incomes, earning the national minimum wage (1).

7 a Tax A is progressive (1):

- At \$10,000 the tax paid = \$1,000 (10%).
- At \$15,000 the tax paid = \$1,650 (11%).
- At \$20,000 the tax paid = \$2,400 (12%).
- At \$25,000 the tax paid = \$3,250 (13%). (1)

b Tax C is proportional (1).

At all levels of incomes, 5% tax is charged (1).

c Tax B is regressive (1) as the same \$650 tax is charged, irrespective of the income level.

- At \$10,000 the tax paid = \$650 (6.5%).
- At \$15,000 the tax paid = \$650 (4.33%).
- At \$20,000 the tax paid = \$650 (3.25%).
- At \$25,000 the tax paid = \$650 (2.6%).

By contrast, a proportional tax charges all income earners the same percentage tax rate (1), i.e. 5% in the case of Tax C.

8 Explanations might include:

- People lack adequate income and wealth (1) to sustain a basic standard of living (1).
- Poverty creates social hardship (1), e.g. the economic costs of poor health such as malnutrition and famine (1), and crime (1).

- Poverty creates huge economic costs (1), e.g. mass unemployment due to a lack of economic activity (1).
- There is potentially a large economic cost due to the government's welfare provision (1).
- Lower national output, or GDP, (1) makes the economy less competitive (1).

9 Explanations might include:

- Low wages (1) — GDP per capita is used to find the average income level in a country, and the lower the GDP, the poorer the country tends to be (1).
- Unemployment (1) — people in poverty are likely to be unemployed, perhaps due to the combination of low literacy, lack of skills and poor health (1).
- Illness (1) — illnesses caused by malnutrition and a lack of healthcare reduce life expectancy in a country (1). The lower the life expectancy, the poorer the country tends to be and so the greater the degree of poverty in the country (1).
- Age (1) — for example, child labour in many parts of the world is caused by extreme poverty, which forces parents to allow their children to work (1).
- Poor healthcare (1) — a lack of investment in health services hinders the ability of a country to develop and get out of poverty (1).
- Low literacy rates (1) — this has major consequences for employment, production and productivity (1), thus negatively impacting on GDP and making it extremely difficult to eradicate poverty (1).
- High population growth (1) — sharing a limited amount of resources among a growing population hinders the country's ability to lift itself out of poverty (1).
- Poor infrastructure (1) — a lack of investment in infrastructure such as transportation and communication links hinder the development of an economy (1), making it difficult to get out of poverty (1).
- Low foreign direct investment (FDI) — a lack of capital resources also limits the ability of a country to create income and wealth, which keeps them stuck in poverty (1).
- High public debt (1) — the repayment of public debt can become increasingly unsustainable for LEDCs (1), leading to further borrowing, ever-increasing debts and widespread poverty (1).

10 Explanations might include:

- Promoting economic growth (1) — lower taxes or interest rates (1) can encourage consumer spending and investment in the economy (1), which in the long run will help to create more jobs and alleviate poverty (1).
- Improving education and training (1) — access to education can increase a person's level of earnings (1) and therefore raise their standard of living (1). In the long run, improved education and training increases the productive capacity of the country (1), creating economic growth and lowering poverty (1).
- The use of progressive taxation (1) — higher-income workers are taxed at a higher rate (1) and the government can use these tax revenues to support lower-income workers or those without any income (1).
- Introducing (or increasing) a national minimum wage (1) — this can improve the standard of living for low-income households (1), which helps to alleviate poverty (1).

Workbook answers

34 Population

- 1 Correct answer: C** improved health technologies

Improved health technologies mean that people live longer on average, thereby raising the average age of the population.

- 2 Correct answer: C** higher fertility rates

Fertility rates measure the average number of children born per woman, thus indicating the potential for population change in a country. The other options are likely to reduce the birth rate in the country.

- 3 Correct answer: D** number of immigrants – number of emigrants

The net migration rate measures the difference between the number of people entering (immigrants) and leaving (emigrants) a country per 1000 of the population in a year.

- 4 Correct answer: A** Low-income countries generally have a lower average age than high-income countries.

In low-income countries, the population distribution can be shown using a traditional population pyramid with far more young people than elderly people.

- 5 Correct answer: D** It has an ageing population.

An ageing population occurs when the average age of a population increases. It is not possible to infer the other three options from the data given about the median age of the UK population.

- 6** The dependency ratio is a comparison of the number of people who are not in the labour force (1) with the number of people in active paid employment (1). The higher the dependency ratio, the greater the burden on taxpayers to support the dependent population (1).

- 7** Explanations might include:

- Birth rate (1) — the number of live births per thousand of the population in a year (1). The higher a country's birth rate, the greater its population growth will tend to be (1).
- Death rate (1) — the number of deaths per thousand of the population in a year (1). The lower a country's death rate, the greater its population growth will tend to be (1).
- Fertility rate (1) — the average number of children born per woman (1). Fertility rates tend to fall as an economy develops due to the higher opportunity costs of raising children (1).
- Net migration rate (1) — the difference between the number of people entering and leaving a country per 1000 of the population in a year (1).

- 8** Underpopulation occurs when a country does not have sufficient labour to make the best use of its resources (1). The population is likely to be declining and the economy is operating below its potential and may be in decline (1).

In contrast, overpopulation occurs when the population is too large (1) given the available resources of the country (1).

- 9 a** Mexico's population has increased steadily (1) from 2006 to 2016 by approximately 1 million people each year (1).

- b** Explanations might include:

- Mexico may be experiencing increasing birth rates and longer life expectancy (1). This means that the tax revenue collected from the working population has to support a greater number of people aged below 14 and above 65 (1), and this increases the burden on the working population (1).
 - The government needs to spend more on education (1) and healthcare (1) because of the increase in population.
 - An increased population may lead to an increase in housing shortages (1) and will increase demands on other resources (1) such as healthcare, food and schools (1).
- c Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
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1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Reasons why a growing population may not bring about negative consequences for the government and natural environment:

- The government is able to collect more tax revenues from a larger workforce.
- Higher tax revenues can enable the government to provide more merit and public goods for the population.
- A larger workforce can lead to a more productive economy, which leads to economic growth and higher incomes and living standards for the population.
- The impact of a population increase on the natural environment can be minimised by putting policies in place, e.g. subsidising renewable sources of energy.

Reasons why a growing population may bring about negative consequences for the government:

- Increased population may increase demands on the government to provide merit and public goods for its citizens.
- The government will have to provide housing, healthcare and education for people as well as emergency services.
- Continual population growth puts more pressure on an economy's scarce resources. This can lead to inflationary pressures or an increase in the demand for imports if the country cannot produce enough to meet the needs and wants of the population.

- Increased population may cause land prices to increase. This may make housing and office and factory space more expensive, which may decrease living standards and deter foreign firms from locating in the country.

Reasons why a growing population may bring about negative consequences for the natural environment:

- Non-renewable resources are depleted in the production process and the increased level of production also puts strain on the natural environment.
 - There may be an increase in air and water pollution caused by an increase in waste products and production.
 - An increase in the use of cars may lead to traffic congestion and air and noise pollution.
- 10 a** An ageing population has a growing number of elderly people (1) aged 65 years and above (1).
- b** An optimum population exists when the output of goods and services per head of the population (1) is maximised (1).
- c** Analysis might include:
- A high median age of 46.7 years suggests that Japan has an ageing population (1), which means that there is an increasing proportion of people aged 65 and above (1).
 - The replacement fertility rate is the number of children that the average woman must have to replace the existing population (1) in order to maintain a stable population size (1). Japan may be facing a decreasing population because the fertility rate is 1.42 children per female (1) and is below the replacement rate of population growth (1).
 - A decreasing birth rate may lead to a decrease in the number of people aged between 16 and 65 (1). This will lead to a decreasing number of people of working age (1) and the dependency ratio will increase (1).
- d** Analysis might include:
- The dependency ratio refers to the number of dependants (children, the unemployed and the elderly) (1) expressed as a ratio or percentage of the total population (1).
 - The low median age in Indonesia suggests that a large proportion of the population is young (1) because 28.3 years is the middle of the age range of the population (1).
 - The low median age suggests that the dependency ratio is high (1) and the higher the dependency ratio, the greater the burden on taxpayers to support the dependent population (1).
 - If birth rates become stable or fall in the future (1), the dependency ratio may decrease (1) when the existing young people get older and enter the workforce (1).

Workbook answers

35 Differences in economic development between countries

1 Correct answer: A economic development

Economic development refers to an improvement in the economic wellbeing and standard of living for the average person in a country.

2 Correct answer: A exchange rate fluctuations

Exchange rate fluctuations do not directly affect the economic development of countries. These fluctuations can occur on a daily basis, based on the demand for and supply of different foreign currencies — usually for international trade purposes.

3 Correct answer: C higher interest rates

Higher interest rates are used to influence the level of economic activity, rather than as a measure or indicator of development.

4 Correct answer: A primary

As an economy develops, people tend to shift away from working in the primary industry and toward the manufacturing or tertiary industry.

5 Current answer: B productivity

Attracting FDI should help a country to achieve higher levels of productivity and output.

6 Economic development refers to an increase in the standard of living (1) within a country. It is an intangible concept that considers both quantitative and qualitative variables (1), such as income levels (1) and political freedom (1).

7 Savings are required to enable banks to have sufficient funds (1) to lend to firms for investment purposes (1). Hence, more savings and investments can directly contribute to economic development (1). However, most people in LEDCs are unable to have any savings (1) as they barely have enough money to meet their basic needs (1).

8 LEDCs have a low national income per head (1), which limits their ability to develop as a country (1). This is partly due to their relatively large population (1) and rapid population growth rate (1), which can limit any increase in real GDP (1) as it reduces their GDP per capita (1).

9 In general, countries with a low GDP per capita are at their early stages of economic development (1), so most people work in the primary sector (1), such as traditional farming or fishing (1). As these countries advance, the majority of their GDP is generated from the secondary sector (1). In MEDCs, the tertiary sector accounts for the largest share of employment and the country's GDP (1) due to the greater reliance on tertiary output (1).

10 Analysis might include:

- The quality of a country's healthcare can be measured by life expectancy at birth (1) or its annual expenditure on healthcare as a percentage of its GDP (1). The better the quality of healthcare, the greater the country's social and economic wellbeing tends to be (1) as people's standard of living will be improved (1).

- The level of education is measured by adult literacy rates (1) or the mean average years of schooling (1) in a country. In general, the greater the level of education in a country, the higher its standard of living tends to be (1) as people are able to secure employment (1).

Workbook answers

36 International specialisation

- 1 Correct answer: D** Households benefit from lower prices.

Specialisation in manufacturing leads to greater levels of output and in a quicker time, thereby reducing average costs of production. Firms are therefore able to charge lower prices to their customers.

- 2 Correct answer: A** employees becoming more skilled

By specialising in their jobs, employees become more skilled. This can also help them to benefit from higher wages. The other options are benefits to firms (employers).

- 3 Correct answer: A** It takes a relatively long time to train to become a top Hollywood actor.

As the training period to become a top actor is a long process, there is a very limited supply of top Hollywood actors. The combination of high demand and low supply means that Hollywood actors are generally paid very high incomes.

- 4 Correct answer: D** increased labour turnover

A disadvantage of specialisation is the monotony (boredom) associated with repetitive roles, causing workers to seek alternative jobs that are more challenging.

- 5 Correct answer: C** lower average costs

Firms that specialise are usually able to benefit from economies of scale (lower unit costs) by operating at a larger capacity. Highly specialised capital equipment, labour or firms find it difficult to switch to alternative uses (Option D), but this is a disadvantage of specialisation.

- 6** Specialisation occurs when individuals, firms, regions or countries concentrate on the production of a particular good or service (1). Production processes are split into a sequence of different tasks or activities (1) in order to raise output. For example, your local dentist is a specialist in dentistry (1), McDonald's specialises in fast food (1), Paris and Milan specialise in fashion and design (1) and Scotland specialises in whisky (1).

- 7** The division of labour refers to the specialisation of labour (1) by getting workers to focus on a specific aspect of the production process (1). Likewise, international specialisation occurs when countries concentrate on the production of certain goods or services due to cost advantages (1), perhaps due to their abundance of resources (1). For example, Bangladesh and India are major producers and exporters of textiles (1); Scotland is famous for its whisky (1); Thailand and Vietnam specialise in the production of rice (1); and Caribbean countries such as Jamaica and Tobago specialise in tourism (1).

- 8** Explanations might include:

- Specialisation means customers pay a premium (1) for the skills and expertise of specialised workers (1), e.g. dentists, lawyers or pilots (1), which leads to higher pay (1).
- Specialised workers also get tasks/jobs done quicker (1) and to a higher quality (1), so are rewarded accordingly (1).
- Higher pay is needed to compensate workers (1) for the higher level of education and training required for specialised work (1).

- A limited supply of highly specialised workers (1), such as brain surgeons or professional tennis players (1), also means that they can demand higher levels of pay (1).

9 Analysis might include:

- Overspecialisation occurs when a firm or country concentrates too much on producing a very limited number of goods or services (1). This potentially exposes the firm or economy to a high higher degree of risk (1). Adverse weather conditions, for example, could wipe out agricultural production, thus severely harming economies that over-rely on agricultural output (1).
- The economy is particularly vulnerable during a recession (1) when firms do not have a large enough range of products to rely on (1).
- Overspecialisation can also limit choice for consumers (1), reducing the competitiveness of firms (1). Instead, domestic customers may look at alternative imported products from foreign suppliers (1).

10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
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0	Limited response with no understanding of the question demonstrated.	0

Advantages of international specialisation for firms include:

- economies of scale
- efficiency gains
- increased labour productivity
- increased productive capacity
- improved international competitiveness

Disadvantages of international specialisation for firms include:

- overspecialisation, i.e. overreliance on a limited range of output of goods or services
- lower labour occupational mobility
- less variety (choice) for consumers
- higher costs of hiring specialised labour and capital equipment

Workbook answers

37 Globalisation, free trade and protection

- 1 Correct answer: C** to increase the demand for domestically produced goods and services

Trade protection increases the costs (and hence the price) of imports, thus increasing the demand for home-produced goods and services, *ceteris paribus*. Whilst this can protect domestic jobs, it does not actually create jobs (Option A). Protection can make domestic firms complacent rather than efficient (Option B).

- 2 Correct answer: C** subsidies

Subsidies are used to cut production costs of domestic firms, thus helping them to reduce the prices of their exports. Embargoes (Option A) are bans on imports. Quotas (Option B) are quantitative limits on the amount of imports, whilst tariffs (Option D) raise the costs (and hence prices) of imports.

- 3 Correct answer: B** dumping

Dumping occurs when foreign firms sell their exports at prices deliberately below those charged by domestic firms. Hence, trade protection is needed to prevent dumping.

- 4 Correct answer: C** free trade

Free trade means that international trade and exchange takes place free from government intervention. Hence, there is an absence of tariffs and other non-tariff barriers to international trade and exchange.

- 5 Correct answer: D** transportation costs

Even though free international trade does not impose any barriers to entry, it does not eliminate the huge need for transporting exported goods all over the world. Transportation costs can therefore act as a natural barrier to international trade and exchange.

- 6** Trade protection is when trade barriers are used (1) to safeguard a country from excessive international trade and foreign competition (1).

- 7** Explanations might include:

- The US government imposes higher tariffs (1), thereby raising the price of cars imported from the EU (1).
- The US government imposes a lower quota (1), reducing the quantity of cars imported from the EU (1).
- The US government subsidises domestic car producers (1), giving US car makers a price advantage over their EU rivals (1).
- The US dollar depreciates against the euro (1), making EU imports more expensive (1).
- The US government raises income tax rates (1), thereby reducing the disposable income of American households (1).
- Higher interest rates in the USA (1) mean that American consumers have less disposable income to buy imports (1).

8 Explanations might include:

- Lower prices (1) — free trade reduces the costs of trading (1), as without trade barriers domestic firms and consumers pay less for imported goods and services (1).
- Greater choice (1) — free trade enables consumers and firms to access a larger variety of goods and services (1) from different producers around the world. For example, Germans can choose to buy German cars, but also cars from Japan, India and the United States (1).
- Efficiency gains (1) — free trade forces domestic producers to focus on improving the quality of their output (1) due to foreign competition (1). For example, competition from Japanese car makers and South Korean electronics firms has forced American producers such as General Motors and Apple to create better-quality products (1).
- Improved international relations (1) — the absence of trade barriers encourages international trade and cooperation between countries (1).

9 Explanations might include:

- Tariffs (1) — a tariff is a tax on imports (1), which increases the costs of production to importers (1), thus raising the price of foreign goods in the domestic market (1) and lowering the quantity of products imported (1).
- Quotas (1) — an import quota sets a quantitative limit on the sale of a foreign good in a country (1). The quota limits the quantity imported (1) and thus raises the market price of foreign goods (1).
- Subsidies (1) — governments can provide subsidies to help domestic firms to compete against foreign imports (1). Subsidies lower the costs of production for home firms (1), thereby helping to protect local jobs (1).
- Embargoes (1) — an embargo is a ban on trade with a certain country (1), often due to a trade dispute or political conflict (1).
- Administrative barriers (1) — countries often use bureaucratic rules and regulations as a form of protection (1). Examples are strict rules regarding food safety, environmental standards and product quality (1). These rules and regulations increase the costs for overseas firms (1), while also helping to protect domestic consumers (1).

10 Use the table below to assign marks.

Level	Description	Mark
3	A detailed discussion, substantiated by information provided, which demonstrates clear understanding of the question and of appropriate economic ideas and theories. There is insightful use of appropriate economic vocabulary and effective analysis of issues under discussion. Both sides of the argument are developed but not necessarily equally. There is effective evaluation, with a judgement and/or conclusion. There may be discussion of other options and strategies with their associated limitations.	6–8
2	A discussion, substantiated by information provided, which demonstrates understanding of the question and of appropriate economic ideas and theories. There is use of appropriate economic vocabulary and theories with analysis of the issues under discussion. The discussion may lack balance and only one side of the argument is presented or it may not be fully reasoned or may lack detail.	3–5
1	Some basic knowledge of economic theory relevant to the question is demonstrated, with some use of appropriate economic vocabulary.	1–2
0	Limited response with no understanding of the question demonstrated.	0

Arguments for protecting domestic industries from foreign competition include:

- to protect infant and declining industries from foreign rivals
- to protect strategic industries from foreign competition, e.g. ammunition and weaponry
- to protect domestic industries from unfair foreign competition
- to protect domestic employment
- to protect domestic consumers from cheap but unsafe foreign goods
- to improve the current account on the balance of payments.

Arguments against protecting domestic industries from foreign competition include:

- trade protection reduces competition, so can damage efficiency
- a lack of international trade reduces choice for domestic consumers
- foreign firms that are more efficient and/or provide competition would have reduced prices for domestic consumers
- trade protection may provoke other countries to retaliate by imposing their own trade barriers

Workbook answers

38 Foreign exchange rates

- 1 Correct answer: C** The large opportunity cost of using foreign exchange reserves to maintain the fixed rate

Governments spend a huge amount of money on a daily basis to maintain (fix) the exchange rate. There is an opportunity cost in this money. With a fixed exchange rate system, Options A and B materialise for reasons other than changes in the exchange rate. The key advantage of fixed exchange rates is the certainty (stability) created for international trade and exchange (thus Option D is incorrect).

- 2 Correct answer: A** appreciation

The term 'depreciation' (Option B) refers to a fall in the value of the exchange rate against other currencies in a floating exchange rate system. The terms 'devaluation' and 'revaluation' (Options C and D) apply when referring to a fixed exchange rate system.

- 3 Correct answer: B** fixed

The government buys and sells currencies in the foreign exchange market to stabilise the exchange rate (at the fixed rate).

- 4 Correct answer: B** floating

When currencies are free to fluctuate (or float), the demand for a currency and its supply determine the equilibrium exchange rate. Governments intervene in the foreign exchange market to fix or manage their currencies (Options A and C). Economists do not refer to 'mixed' exchange rate systems (Option D).

- 5 Correct answer: D** more firms from New Zealand investing in Britain

If there are more firms from New Zealand investing in Britain, this raises the demand for pound sterling (the diagram shows an increase in the demand for NZ dollars).

- 6** The exchange rate refers to the price of one currency measured in terms of other currencies (1), e.g. \$1 = €0.75 or £1 = ¥173 (1).

- 7** \$1 = €0.73

Hence, \$70 in euros = $70 \times 0.73 = 51.1$

Therefore the price of the textbook = **€51.10**.

(1 mark for the correct working out and 1 mark for the right answer.)

- 8** £1 = HKD10.5

Hence, $6000 \div 10.5 = 571.43$.

Therefore the price of the iPad = **£571.43**.

(1 mark for the correct working out and 1 mark for the right answer.)

- 9** AUD1 = GBP0.57 = HKD6

Hence GBP1 = $6/0.57$ HKD

Hence GBP1 = **HKD10.53**

(1 mark for the correct working out and 1 mark for the right answer.)

- 10 a** An appreciation means that the value of the currency has increased (1). An example is the yuan rising in value against the US dollar from \$1 = 6.35 yuan to \$1 = 6.15 yuan (1).
- b** Analysis might include:
- China is likely to sell fewer exports (1) as foreign buyers need more Chinese yuan to pay for Chinese exports (1).
 - Chinese households and firms are more likely to buy imported products (1) as their currency is worth more on the foreign exchange market (1).
 - This will tend to cause a current account deficit (1) on the balance of payments for China, as net exports will fall, *ceteris paribus* (1).
 - However, this depends on the price elasticity of demand (1) for Chinese exports and imports.

Workbook answers

39 Current account of balance of payments

- 1 Correct answer: D** the visible trade balance

The visible trade balance is calculated by deducting the value of a country's imports of goods from the value of its exports of goods.

- 2 Correct answer: D** money spent on intangible products

Money spent on intangible products (services) is part of the invisible trade balance on the current account.

- 3 Correct answer: C** visible trade balance + invisible trade balance + net income flows and transfers

The three components of the current account on the balance of payments are: visible trade balance, invisible trade balance, and net income flows and transfers.

- 4 Correct answer: D** higher unemployment

With a sustained current account deficit, there is a net outflow of cash as households and firms spend more on foreign goods and services. This will tend to reduce aggregate demand, the exchange rate and standards of living.

- 5 Correct answer: B** lower income taxes

Lowering income taxes helps to increase household disposable income, which can result in higher demand for imports (thus worsening the current account).

- 6** The balance of trade has worsened (1), as calculated by the difference between the trade in goods (visible balance) and services (invisible balance) (1).

(1 mark for the appropriate use of numerical calculations in the answer.)

Year	Invisible balance (\$bn)	Visible balance (\$bn)	Balance of trade (\$bn)
1	15.2	12.3	-\$2.9
2	16.7	13.4	-\$3.3

- 7** Components include:

- The trade in goods (visible trade balance) (1).
- The trade in services (invisible trade balance) (1).
- Primary income, also known as investment income (1).
- Secondary income, also known as net income transfers (1).

- 8** It is possible if one component or other components of the current account, e.g. the trade in services (1), is in surplus (1), and the surplus of the other components is greater (1) than the deficit on the visible trade balance (1).

- 9 a** The visible balance is the balance of trade in goods (1), i.e. a record of the country's exports and imports of physical goods (1), e.g. oil, vehicles, foodstuff and computers (1).

b Trade balance for Country D (\$billion):

Exports	103
Goods	87
Services	16
Imports	113
Goods	87
Services	26
Visible balance	0
Invisible balance	10
Trade balance	(10)

(2 marks for all four correct figures.)

10 Analysis might include:

- A fall in the exchange rate reduces the purchasing power of the domestic currency (1). This can reduce a country's current account deficit for the following reasons:
 - Export prices fall (1), thus raising the demand for exports, ceteris paribus (1).
 - At the same time, import prices are relatively higher (1), thereby reducing the demand for imports (1).
 - The net effect of higher export revenues and lower import expenditure will tend to improve the country's current account (1).
- However, the effectiveness of a fall in the exchange rate will depend on time lags (1) for buyers and sellers to adjust to the lower exchange rate, and the price elasticity of demand for exports and imports (1).