



GCE AS

B520U20-1



ECONOMICS – AS component 2
Exploring Economic Issues

THURSDAY, 17 MAY 2018 – MORNING

2 hours

B520U201
01

ADDITIONAL MATERIALS

In addition to this examination paper, you will need a calculator and a WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Answer **all** questions.

Use black ink or black ball-point pen.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

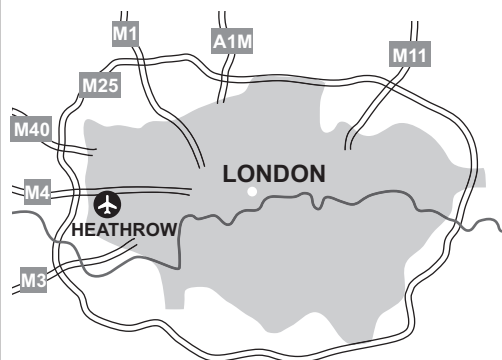
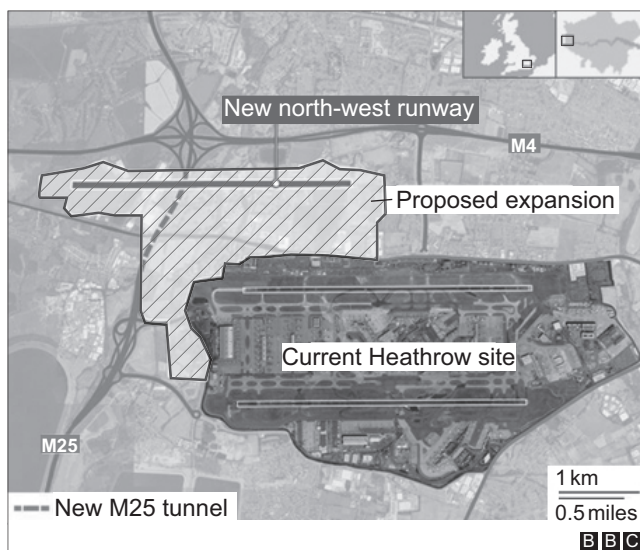
Answer all questions.

1.

EXTRACT 1: THIRD RUNWAY AT HEATHROW CLEARED FOR TAKEOFF

The government has approved a third runway at Heathrow to expand UK airport capacity.

Proposed new runway at Heathrow



Source: Airport Commission

Transport Secretary, Chris Grayling, said the “truly momentous” decision would support trade and create jobs. The Department for Transport said a new runway at Heathrow would bring economic benefits to passengers and the wider economy worth up to £61bn and create as many as 77 000 additional local jobs over the next 14 years.

Heathrow Airport said the expansion would allow it to offer more direct flights to UK destinations as well as up to 40 new cities abroad such as Wuhan in China, Osaka in Japan and Quito in Ecuador. Air industry analysts also said that unless the third runway goes ahead, the fact that Heathrow is already at full capacity would lead to an average £200 increase in the price of a return flight in today’s prices within a decade.

Sadiq Khan, the Mayor of London, however, said that expanding Heathrow was the wrong decision for both London and the UK.

“There are more people affected by noise because of Heathrow than people affected by the airports in Paris, Amsterdam, Frankfurt, Munich and Madrid combined,” he said. “The air in London is a killer. It makes you sick and it’s unlawful.”

Greenpeace UK chief, John Sauven, also said a third runway at Heathrow would increase air pollution and “be a waste of time, money and lives”.

The issue has split the government, with Foreign Secretary Boris Johnson saying a third runway was “undeliverable”; the implication being that the decision would be resisted by local councils and residents meaning millions of pounds being spent on legal fees. Industry analysts also suggest that the project will require at least £11bn of government money if it is to become a reality, although the government claims that the cost will be closer to £5bn.

Other analysts have pointed out that with unemployment in and around London at a historic low, finding the workforce to complete these projects could well be a challenge, requiring an influx of overseas workers and running the risk of creating significant inflationary pressures in the South East, reducing the forecasted benefits. Likewise, the risk to London’s economy as a result of the UK’s decision to leave the EU makes the benefits of the expansion harder to quantify.

EXTRACT 2: THE LONDON HOUSING MARKET

The Government has given the go-ahead for the third runway, and if there's one group of people who won't be happy about it, it's the people living nearby.

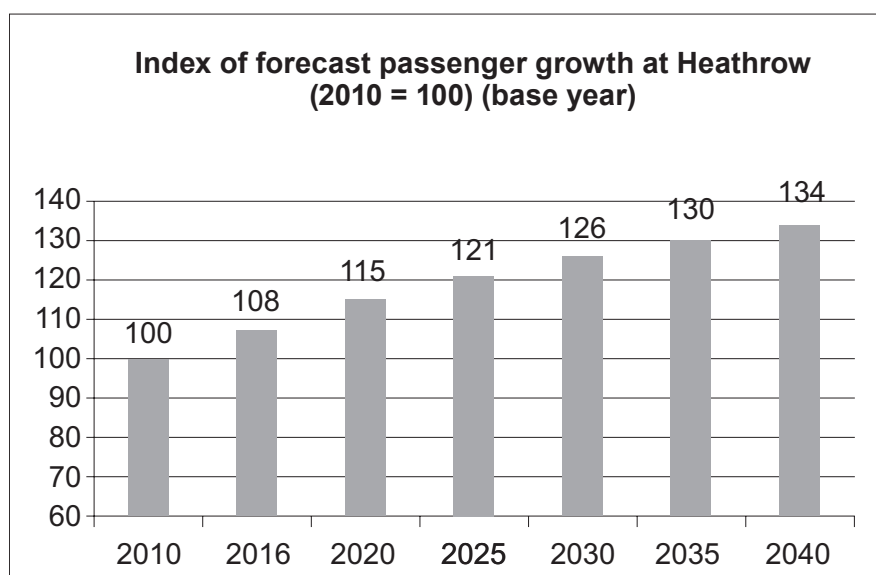
Estate agents eMoov think the decision could lead to a 20% drop in house prices in the area due to the noise and air pollution that the project will bring.

Others argue that any effect will be temporary at most. The possibility of Heathrow expansion has been known about for over 40 years and house prices already reflect this. In any case, the London housing market has been extremely strong as a result of good economic performance – London is forecast to grow more than twice as fast as the rest of the UK over the next 5 years – and that's before the effects of Heathrow are taken into account.

With the average house price in affected areas at £410 000, there is some hope that the decision might result in more affordable housing in London, something that has been a long time coming.

EXTRACT 3: FORECAST PASSENGER GROWTH AT HEATHROW

(Assuming no supply constraints): 2016 numbers = 70 million passengers per year



- (a) (i) Assuming that the eMoov forecast in **Extract 2** is correct, calculate the predicted average price of a house in areas affected by the third runway, following the Government's announcement. [2]
- (ii) Using a supply and demand diagram, discuss how likely it is that house prices will fall by 20% in affected areas over the next few years. [8]
- (b) To what extent might the decision to build a third runway at Heathrow be considered to be an example of government failure? [10]
- (c) (i) Using the data in **Extract 3**, calculate the forecast number of passengers for Heathrow in 2040 assuming that there are no supply constraints. [2]
- (ii) Using a supply and demand diagram, explain how the construction of a third runway at Heathrow is expected to prevent a £200 increase in the price of a return flight. [6]
- (d) Using AD/AS diagrams, evaluate the claims made by the Department of Transport in the first paragraph of **Extract 1**. [12]

2. HIGHER OIL PRICE AND WEAKER POUND START TO PUSH UP INFLATION

13th September 2016

Official figures today will show inflation rising for a third consecutive month as higher oil prices and the weaker pound (Figure 1) start to push up prices. Consumer price inflation hit 0.8% in August 2016, the highest since November 2014. The Bank of England expects prices to be growing at almost 2% and climbing by the middle of 2017 increasing pressure for an interest rate rise.

Evidence of growing inflation has also been seen in Office for National Statistics (ONS) data. The ONS believes that production costs will rise by 8.1% on an annual basis, the highest since December 2011. These are seen as an early indicator for inflation, as businesses have to absorb rising costs or pass them on to consumers. Production costs are soaring because of the fall in the value of the pound, down by 10% since the Brexit vote on the UK's membership of the EU on the 23rd June.

Figure 1



BBC

Source: Bloomberg-data as of 11.27 BST. MON 27 June

The Bank of England's Monetary Policy Committee cut interest rates to 0.25% from 0.5% in August 2016 as well as providing the commercial banks with £100bn of cheap funding. Business confidence is at a four-year low following the Brexit vote, with the outlook for demand, employment and investment weakening across all sectors of the economy. However, this relaxed monetary policy may have to be reversed if inflation takes hold and rises above its target of 2%; then interest rates would be likely to rise.

20 The UK's vote to leave the EU means that goods coming into this country from EU member
states could be subject to tariffs which could also push up prices. However, supporters of
Brexit think that the EU will be keen to sign a free trade deal with the UK as some EU member
states, especially Germany, have a trade surplus with the UK. Theresa May, the British Prime
Minister, says she wants to turn post-Brexit Britain into a "global leader in free trade". Indeed
25 many supporters of Brexit want to see the UK copy the so called "Singapore model" including
Patrick Minford the economic advisor to former Prime Minister, Margaret Thatcher. Minford,
who is a leading supporter of Singapore's tariff-free trade said "They got rid of protectionism
and have flourished as one of the world's most free market economies."

30 However, the global trading system has never looked under greater strain and protectionist
forces are on the rise everywhere. In the past year global public opinion has swung against
free trade putting pressure on governments to stop further moves towards freer trade.

Source: The Times 13th September 2016 (adapted)

- (a) Using a supply and demand diagram, explain why a higher oil price and a weaker pound could cause the price of a product to rise. [4]
- (b) Why might a business's ability to "absorb rising costs or pass them on to consumers" (line 9) depend upon the price elasticity of demand for its product? [4]
- (c) Using an appropriate diagram, outline possible causes of the change in the value of the pound at the start of Friday the 24th June (Figure 1). [4]
- (d) To what extent will "a fall in the value of the pound" (line 10) benefit UK firms? [8]
- (e) Using AD/AS diagrams and with reference to the data, discuss whether the Bank of England will need to increase interest rates to prevent inflation from rising above its target level. [10]
- (f) Using an appropriate diagram and with reference to the data, evaluate the economic effects of UK tariffs being imposed on products imported from the rest of the EU. [10]

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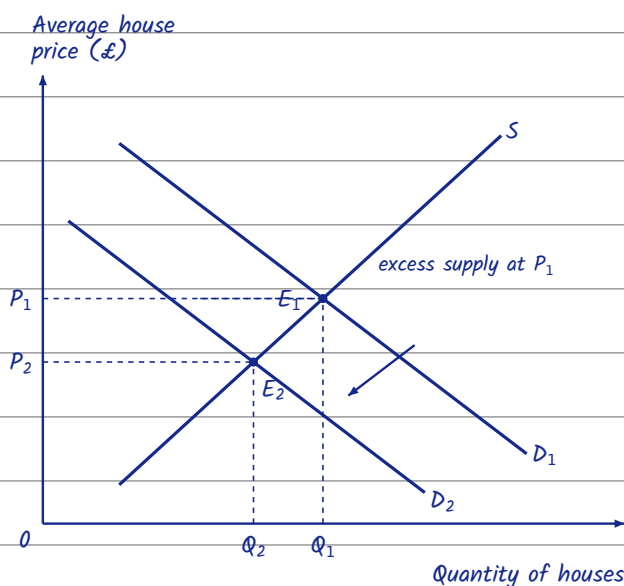
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1 (a)(i)

Fall in price = $20\% \times £410\,000 = £82\,000$ *Predicted average price = $£410\,000 - £82\,000 = £328\,000$*

1 (a)(ii)

eMoov predicts a 20% fall in house prices near Heathrow because of the noise and air pollution the third runway will bring (Extract 2). Living near a busy airport reduces the utility of owning a house there, so fewer people want to move into the area and some existing residents will sell to get away.



As the diagram shows, demand for houses in the affected area falls from D_1 to D_2 . At the original price P_1 there is now excess supply: sellers cannot find buyers, so buyers are in a stronger negotiating position and sellers must reduce their asking prices. Price falls until a new equilibrium is reached at P_2 , Q_2 . If residents rush to sell, supply also rises, which pushes prices down even further. Because the supply of housing is price inelastic in the short run, most of the adjustment is in price, so a large fall such as 20% is possible. However, a 20% fall seems unlikely. Heathrow expansion has been discussed for

over 40 years, so house prices already reflect it and any effect may be temporary. London is forecast to grow more than twice as fast as the rest of the UK over the next 5 years, so rising incomes will increase demand for housing generally. Heathrow's growth will also create up to 77 000 jobs (Extract 1), raising demand for housing near the airport, and houses demolished for the construction will reduce supply. These shift demand right or supply left, offsetting the fall.

On balance, prices may fall slightly in the streets most affected by noise, but a 20% fall is unlikely: strong London demand and new jobs mean any fall is likely to be small and temporary, not £82 000 on an average house.

1 (b)

Government failure occurs when government intervention causes a more inefficient allocation of resources than would occur without that intervention, so intervention wastes resources, misallocates them and causes a net welfare loss. The third runway could be government failure because of its external costs. Sadiq Khan says more people are affected by noise from Heathrow than by the airports in Paris, Amsterdam, Frankfurt, Munich and Madrid combined, and that London's air is a 'killer' and 'unlawful'. By approving expansion, the government increases these negative externalities: third parties suffer noise and pollution costs that are not paid for by airlines or passengers. The marginal social cost of flights is above the marginal private cost, so air travel is already over consumed and expansion increases the welfare loss. Damage to health will also add to NHS costs, a further misallocation of resources.

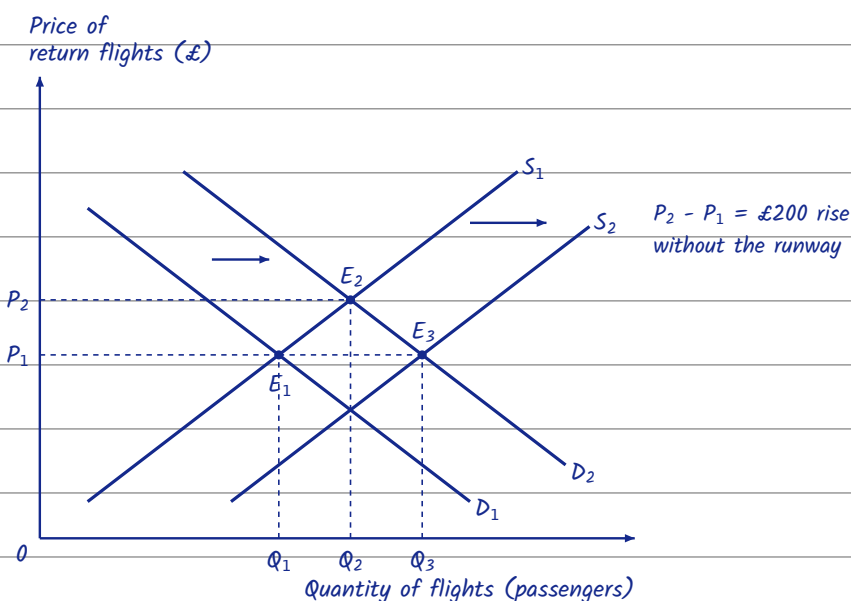
The financial costs may also be very high. Analysts suggest the project will need at least £11bn of government money, more than double the government's estimate of £5bn, and local councils and residents may resist it, meaning millions of pounds spent on legal fees and delays. This money has a high opportunity cost, such as spending on schools, hospitals or transport in the North, so expansion may widen the North-South divide. Greenpeace calls it 'a waste of time, money and lives'. If the government has imperfect information

and underestimates the costs, the costs may exceed the benefits.

On the other hand, there are strong reasons why it may not be government failure. The Department for Transport says it will bring benefits worth up to £61bn and up to 77 000 extra jobs over 14 years, far more than even the £11bn cost. Heathrow is already at full capacity, so without expansion return flights would rise by an average of £200 within a decade, excluding lower income groups from flying and increasing inequality. More direct flights to UK destinations and up to 40 new cities such as Wuhan support trade. Higher GDP increases tax revenue, which may pay for the government's investment. Whether it is government failure depends on whether the benefits are realised. Skills shortages, with unemployment in London at a historic low, could cause inflation and reduce the benefits, and Brexit makes them harder to quantify. It also depends on how large the external costs are and whether they can be reduced, for example by noise insulation or restrictions on night flights. Overall, the decision is not clearly government failure: the forecast £61bn of benefits is much larger than the costs, so it is likely to improve resource allocation if it is delivered. However, if legal challenges, cost overruns and pollution costs are as large as critics claim, it could become government failure, so the government must ensure the external costs are reduced.

- 1 (c)(i) 2016 index = 108 = 70 million passengers, 2040 index = 134
2040 passengers = $134/108 \times 70$ million = 86.85 million passengers (about 86.9 million)

- 1 (c)(ii) Demand for flights from Heathrow is rising: Extract 3 shows the passenger index rising from 108 in 2016 to 134 in 2040, because rising incomes and more trade increase demand for air travel. On the diagram demand shifts right from D_1 to D_2 .

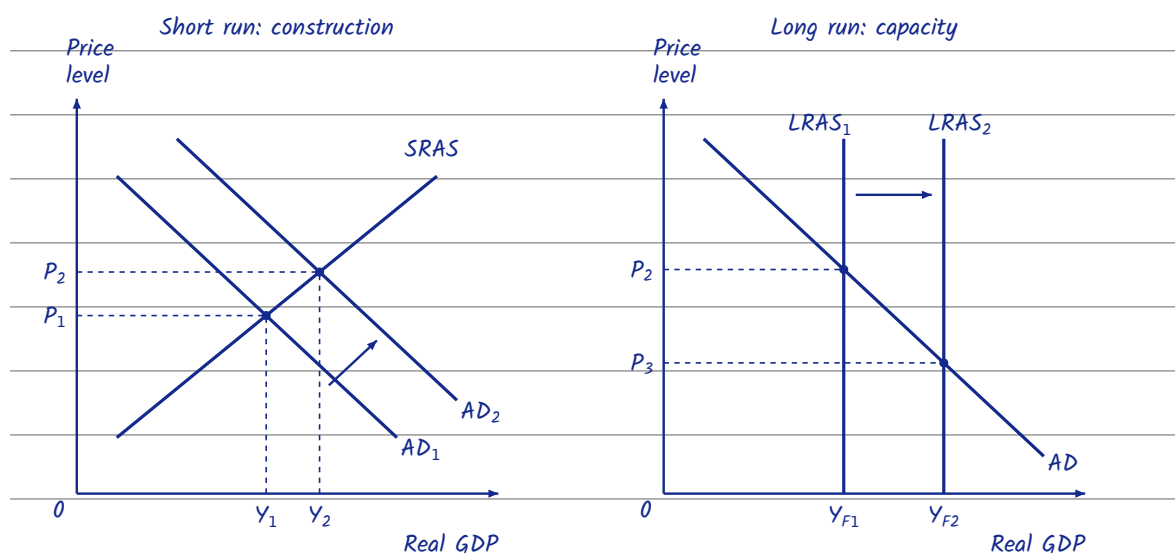


Without the runway, Heathrow is already at full capacity, so the supply of flights cannot increase and stays at S_1 . At P_1 there would be excess demand of Q_1 to Q_3 , so airlines would ration the scarce seats by raising fares until the market cleared at E_2 . The price rises from P_1 to P_2 , which is the average £200 increase in a return flight forecast by analysts.

The third runway increases capacity, so more take-off and landing slots allow airlines to supply more flights at each price: supply shifts right from S_1 to S_2 . The increase in supply meets the increase in demand, so the excess demand is eliminated and the new equilibrium is E_3 , where fares stay at P_1 but passengers rise to Q_3 . More slots also allow new airlines to enter, increasing competition, which makes it harder for airlines to raise fares. Therefore the runway is expected to prevent the £200 increase.

1 (d)

The Department for Transport (DfT) claims the runway will bring benefits worth up to £61bn and create as many as 77 000 additional local jobs over the next 14 years.



In the short run, construction of the runway, the new M25 tunnel and terminals is investment, a component of aggregate demand ($AD = C + I + G + X - M$). As the first diagram shows, AD shifts right from AD_1 to AD_2 , so real GDP rises from Y_1 to Y_2 . Construction firms need more workers, so jobs are created directly. These workers spend their incomes in local shops, pubs and restaurants, and construction firms buy materials from the local supply chain, so there is a multiplier effect that raises GDP and employment by more than the initial investment.

In the long run, the runway increases the productive capacity of the economy. More direct flights to UK destinations and up to 40 new cities such as Wuhan, Osaka and Quito reduce transport costs and congestion, make trade easier and attract inward investment into the South East. As the second diagram shows, LRAS shifts right from $LRAS_1$ to $LRAS_2$, increasing potential output from Y_{F1} to Y_{F2} with a lower price level P_3 . Permanent jobs are created in airport services, such as baggage handlers, airline staff and car-park workers, and passengers benefit from lower fares and quicker journeys. This supports the DfT's claims for both jobs and GDP.

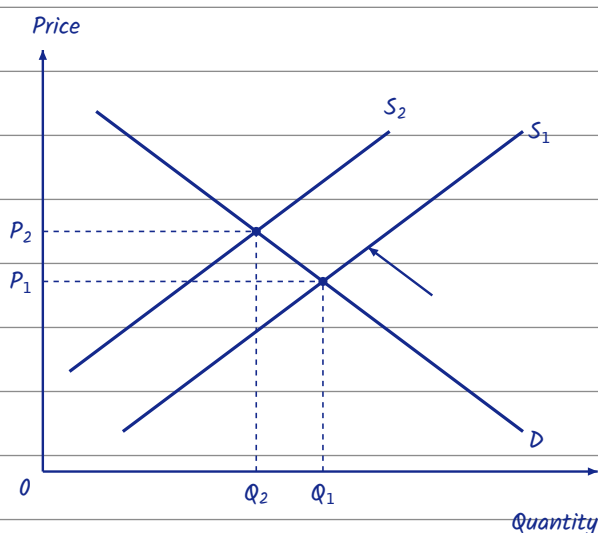
However, the claims may be exaggerated. They are 'up to' figures, the best case. Boris Johnson argues the project is 'undeliverable' and legal challenges by

councils and residents could delay it for years, so the benefits may come much later or not at all. Unemployment in and around London is at a historic low, so the economy is close to full capacity: on the first diagram the SRAS would be steep, so higher AD mainly raises the price level from P_1 to P_2 , creating inflationary pressure in the South East rather than extra real GDP. Skills shortages also mean many jobs may go to overseas workers rather than local people, and their incomes may be sent abroad, reducing the multiplier. Brexit may reduce trade and investment in London, so the long run LRAS shift may be smaller, and the cost of £5bn to £11bn and the cost of pollution must be set against the benefits.

Overall, the DfT's claims are justified in direction, since the runway should increase both AD and LRAS and create jobs. However, the size of the benefits depends on how quickly it is built, whether there is spare capacity and the impact of Brexit, so the actual benefits are likely to be lower than £61bn and fewer than 77 000 jobs will go to local people.

2 (a)

Oil is a key input for transport, energy and plastics, so a higher oil price raises firms' costs of production. A weaker pound means imported raw materials and components cost more in pounds, because each £1 buys fewer dollars (Figure 1). Oil is priced in dollars, so the weak pound raises its sterling price even further.



As the diagram shows, higher costs mean firms are willing to supply less at each price, so supply shifts left from S_1 to S_2 . At P_1 there is excess demand, so the price is pushed up to P_2 and quantity falls from Q_1 to Q_2 .

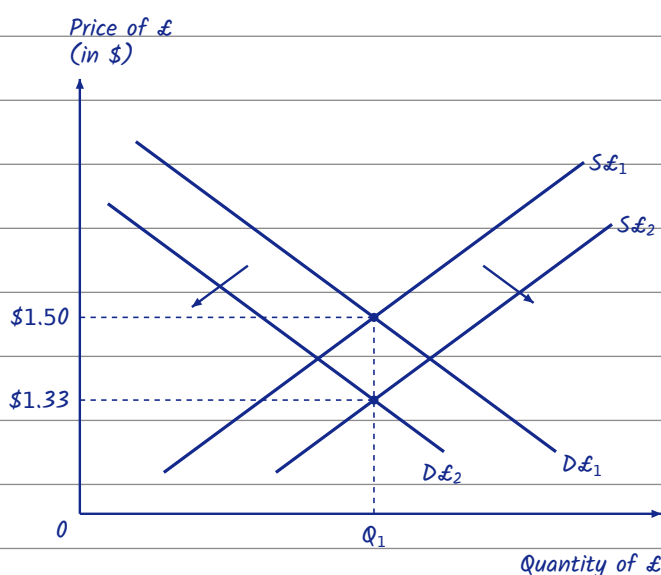
2 (b)

Price elasticity of demand (PED) measures the responsiveness of quantity demanded to a change in price: $\% \text{ change in quantity demanded} \div \% \text{ change in price}$.

If demand is price inelastic (PED less than 1), a firm can pass on rising costs to consumers by raising prices, because quantity demanded falls by a smaller percentage than the rise in price, so total revenue rises and profit margins are protected. If demand is price elastic (PED greater than 1), for example because there are many substitutes, raising the price causes quantity demanded to fall by a larger percentage, so total revenue falls. The firm would therefore have to absorb the rising costs by accepting lower profit margins instead.

2 (c)

Figure 1 shows the pound falling from about \$1.50 late on Thursday 23 June to around \$1.33 at the start of Friday 24 June, after the result of the Brexit vote.



The vote to leave the EU was unexpected and created uncertainty about future UK trade and growth, so confidence collapsed. Speculators and investors sold

pounds, expecting the pound to fall, and foreign investors reduced demand for UK assets. As the diagram shows, the supply of pounds shifts right ($S_{£1}$ to $S_{£2}$) and demand for pounds shifts left ($D_{£1}$ to $D_{£2}$), so the pound depreciates from \$1.50 to \$1.33.

2 (d)

A fall in the value of the pound, down 10% since the Brexit vote (line 10), makes UK exports cheaper in foreign currencies and imports more expensive in pounds.

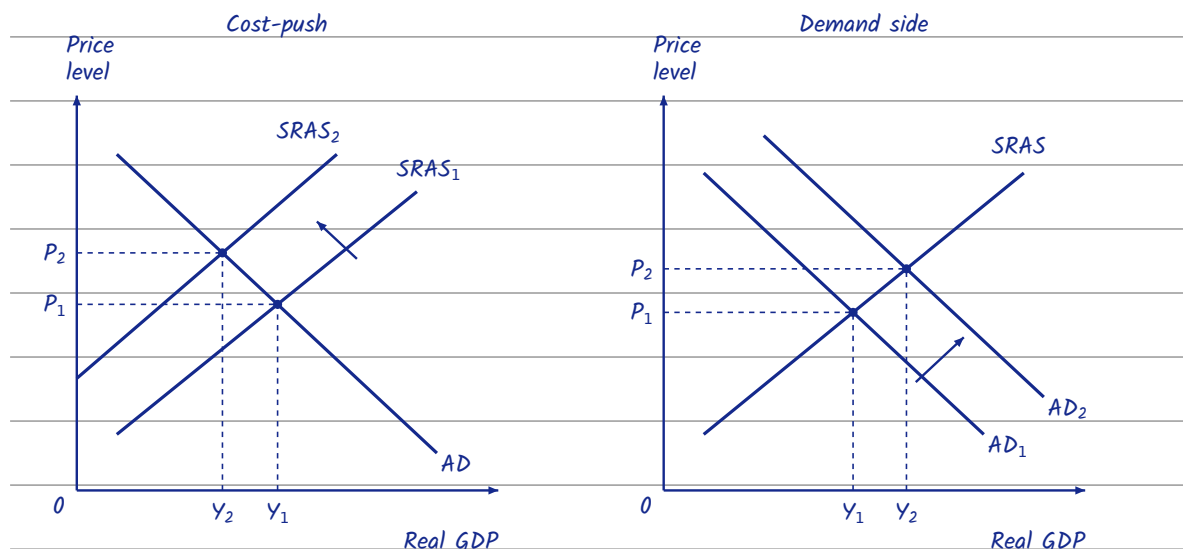
This benefits UK exporters. If a UK good costs £100 and the pound falls from \$1.50 to \$1.35, its price in the US falls from \$150 to \$135, so UK products become more price competitive and demand for them rises, increasing exporters' revenues and profits. UK firms that earn revenue overseas also gain, because each dollar earned converts into more pounds. Imports become more expensive, so UK consumers switch to domestic products and UK firms face less foreign competition. Fewer UK residents take holidays abroad and more foreign tourists visit, so the UK tourist sector benefits.

However, many UK firms import raw materials and components. Production costs are rising by 8.1% (line 7), so firms that import, especially those that only sell in the UK, suffer lower profit margins or must raise prices, causing imported inflation. If demand for UK exports is price inelastic, the lower foreign price causes only a small rise in quantity, so export revenue in foreign currency may fall. Many exports, such as luxury cars, compete on non-price factors like quality and design, so a lower price adds little. UK firms may not have the capacity to increase output, and if overseas markets are in recession, demand will not rise. Business confidence is at a four-year low (line 15), which may reduce investment.

Overall, a fall in the pound benefits exporters and import-competing firms with price elastic demand, but harms firms that rely on imported inputs. The net benefit depends on PED for exports, how much of their inputs are imported and whether the fall lasts, so it is likely to be limited in the short run.

2 (e)

Inflation is a sustained rise in the general price level. The Bank of England's target is CPI inflation of 2%, and it uses interest rates to keep inflation near this target. In August 2016 inflation was only 0.8%, but the Bank expects it to reach almost 2% and to keep climbing by mid 2017 (lines 3 to 4).



There are strong cost-push pressures. Higher oil prices and the 10% fall in the pound mean production costs are rising by 8.1%, the highest since December 2011 (lines 7 to 10). Firms raise prices to protect profit margins, so as the first diagram shows, SRAS shifts left from $SRAS_1$ to $SRAS_2$ and the price level rises from P_1 to P_2 . If workers then demand higher wages to protect their real incomes, a wage-price spiral may develop. Possible EU tariffs after Brexit would also raise import prices (line 20).

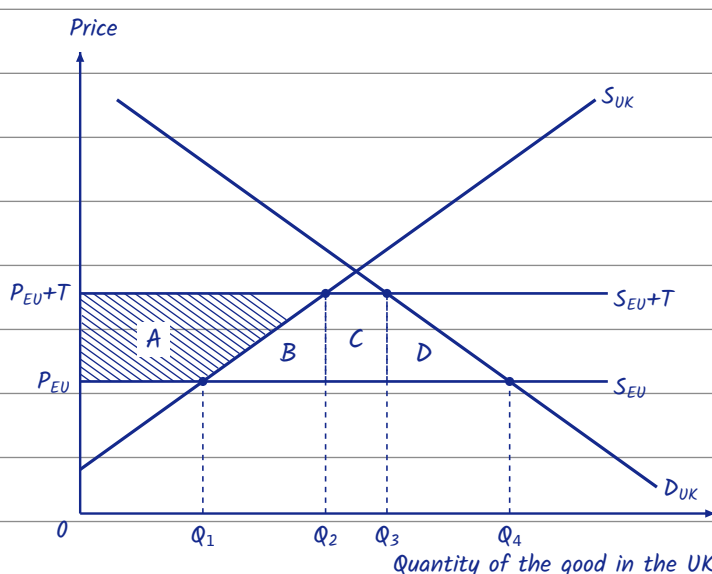
There may also be demand-pull pressure. The cut in interest rates to 0.25% and £100bn of cheap funding for banks (lines 13 to 14) make borrowing cheaper and saving less attractive, so consumption and investment rise, and the weak pound makes exports cheaper and increases net exports. As the second diagram shows, AD shifts right from AD_1 to AD_2 , raising the price level from P_1 to P_2 . Together these could push inflation above 2%, so the Bank would need to raise interest rates to reduce AD.

However, there are reasons why a rise may not be needed. Business confidence is at a four-year low and the outlook for demand, employment and investment is weakening across all sectors (lines 15 to 16). Uncertainty may cause households to save more, so AD may actually shift left, offsetting the cost-push inflation and causing a fall in real GDP. Cost-push from a depreciation is often a one-off rise in the price level, which drops out of the annual rate after a year, and the pound may recover from its post-Brexit lows. A rise in rates would also worsen the fall in output and unemployment in a weak economy, so the Bank may prioritise its secondary objective of supporting growth and 'look through' temporary inflation. The outcome also depends on the Brexit deal, global oil prices and the government's fiscal stance.

Overall, the Bank of England is unlikely to need to raise interest rates in the near future. Inflation is only 0.8% and, although cost-push pressures are strong, weak confidence and investment will limit demand-pull inflation. A rate rise would only be needed if the higher inflation became persistent through rising wages and expectations.

2 (f)

A tariff is a tax on imports. If the UK leaves the EU without a free trade deal, UK tariffs could be imposed on products imported from the rest of the EU, raising their price from P_{EU} to $P_{EU}+T$.



As the diagram shows, the tariff raises the price in the UK, so domestic demand falls from Q_4 to Q_3 and UK firms increase output from Q_1 to Q_2 . Imports fall from Q_1Q_4 to Q_2Q_3 , improving the UK's current account balance. UK producers gain producer surplus (area A), so output, profit and employment in UK firms rise, and growing or strategic industries are protected. The government gains tax revenue (area C). Lower imports raise net exports and AD, creating a positive multiplier effect on UK GDP.

However, consumers pay higher prices and lose consumer surplus (A+B+C+D), and areas B and D are a deadweight welfare loss, as inefficient UK firms replace cheaper EU producers and resources are misallocated. Tariffs would make inflation worse, adding to the effect of the 10% fall in the pound, and UK firms that import components already face 8.1% rises in production costs (line 7), so costs and prices would rise further (cost-push inflation). The EU is likely to retaliate with tariffs on UK exports, reducing UK export demand, and business confidence, already at a four-year low, would fall further, reducing investment. UK firms may also lack the capacity to replace EU imports. Supporters of Brexit point to the 'Singapore model', where tariff-free trade has let it flourish as a free market economy (lines 24 to 27).

The overall effect depends on the size of the tariffs and how many products they cover, and on the price elasticity of demand for imports. Tariffs only apply to EU goods, so UK consumers could switch to cheaper imports from other countries. The policy is only possible once the UK leaves the EU, and Germany's trade surplus with the UK gives the EU an incentive to agree a free trade deal (lines 20 to 22).

Overall, tariffs on EU imports would be harmful to the UK economy. The gains to some UK producers and the government are outweighed by higher prices, welfare loss and the risk of retaliation, especially at a time of rising inflation and weak confidence.