Please check the examination details below before entering your candidate information

Candidate surname	Other names
StemUp Model Solution	

Centre Number | Candidate Number

Pearson Edexcel Level 3 GCE

Time 2 hours

Paper reference **9EC0/03**

Economics A

Advanced

PAPER 3: Microeconomics and Macroeconomics

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- There are two sections in this question paper.
- In Section A, answer **all** questions 1(a) to 1(c) and **one** question from 1(d) or 1(e).
- In Section B, answer **all** questions 2(a) to 2(c) and **one** question from 2(d) or 2(e).
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets
  – *use this as a guide as to how much time to spend on each question.*
- Calculators may be used.

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.

Turn over ▶

P66204A

©2022 Pearson Education Ltd.

1/1/1/

P 6 6 2 0 4 A 0 1 3 6

Pearson

SECTION A

Read Figure 1 and the following extracts (A to C) before answering Question 1.

Answer ALL Questions 1(a) to 1(c), and EITHER Question 1(d) OR 1(e).

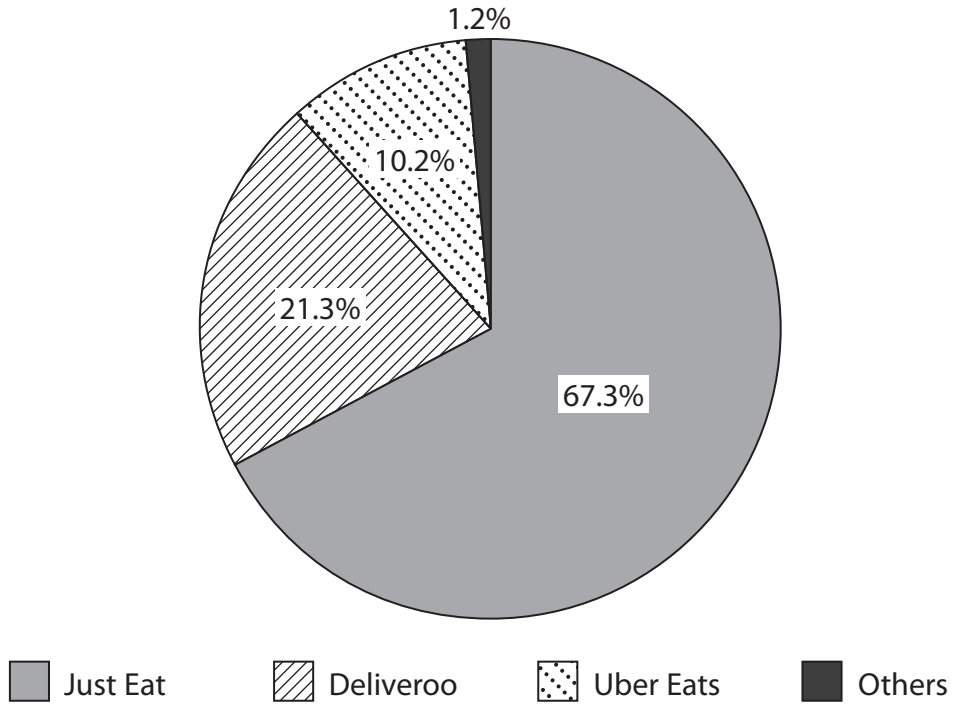
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 1

The food delivery industry

Figure 1: Market share for third-party food delivery services in the UK, 2019



(Source: adapted from https://onefourzerogroup.com/the-takeaway-takeover/)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Extract A

National Minimum Wage rises are more significant for 23 to 25-year-olds

In 2021, the National Minimum Wage main rate, also known as the National Living Wage, rose by 2.2% to £8.91, following a 6.2% rise in 2020. By reducing the age at which people are eligible for the National Living Wage to 23 in 2021, it is estimated that an additional 7.5% of 23 to 25-year-olds could get a 71p an hour pay rise. This amounts to an 8.7% increase, which may cause further financial worries for employers.

(Source: adapted from https://www.ndna.org.uk/NDNA/News/Latest_news/2020/Minimum_wages_to_rise_by_inflation_in_April.aspx)

Extract B

What is the true cost of the food delivery service?

The food delivery industry has boomed in recent years. Just Eat, Uber Eats and Deliveroo all offer very similar services – third-party food delivery firms that take up to 30% of the price of restaurant meals and deliver them to customers within a certain radius. The average spend per customer is around £15 with a £5 delivery fee, about five times more expensive than cooking at home and the same price as eating in the restaurant. Cash rich, time poor professionals increasingly turn to food delivery.

Food delivery comes with many layers of packaging. In the UK, there are 200 million meals annually with around 1.4 billion individual pieces of plastic for heat retention and protection when travelling, but does it really have to be plastic? People tend to order more food, often high in fat, sugar and salt, and don't even have to get up from their sofa.

But there are concerns that the delivery firms are exploiting employees who have no alternative. There is an issue of low pay and informal contracts. Delivery drivers are classed as 'independent contractors', and therefore not subject to some employment rights including a guaranteed minimum wage, sick pay, pensions or holiday pay. Drivers are paid either a flat hourly rate, or a fee per delivery. Factors such as delivery distance, speed, how busy it is and whether there are multiple drop-offs are all factored into how much a driver is paid. Deliveroo says its wages amount to around £10 per hour, but drivers say that during 2020 their pay has been as low as £1 per hour. Drivers are not paid extra for petrol or to maintain their vehicles. Many drivers are recent immigrants or students, who do not have property or savings to fall back on.

The government could address this with widening minimum pay legislation to contracted workers, by setting codes of practice, or by setting recommended wage targets. Furthermore, there are health and safety issues for workers. Vehicle safety checks, length of shifts and safety equipment are of concern. However, there are still people who take benefit from working flexibility.

(Source: adapted from https://www.theguardian.com/australia-news/2020/oct/25/home-food-delivery-what-is-the-most-ethical-way-to-order-in and https://digitalcommons.molloy.edu/cgi/viewcontent.cgi?article=1043&context=bus_fac)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Extract C

Integration in the third-party food delivery industry

The Competition and Markets Authority (CMA) is watching carefully to prevent any one firm having complete control of the food delivery industry. Just Eat, the market leader, agreed to merge with successful Dutch firm Takeaway.com in 2020, creating a new European leader by revenues. It also bought Grubhub in the US, with 20 million active users. Just Eat uses an aggressive pricing strategy, undercutting delivery fees below the average cost of other firms in the market, that will force them to merge in order to gain some economies of scale.

Amazon, having failed with its own delivery company Amazon Restaurants in 2018, has bought 16% of Deliveroo. The CMA took over a year to agree to the partial integration, on the argument that Deliveroo would close down without external investment. Amazon has unique expertise in marketing, increasing customer share and, most importantly, efficiency in delivering things. Food delivery is often uneconomical because a single household puts in a single order from a single restaurant at any one time. Tech companies such as Amazon can improve the business: once a meal has been ordered, an app often moves that restaurant to the top of the rankings for that neighbourhood, in the hope of getting a second and third delivery.

So why do restaurants turn to these delivery firms? The sheer volume of customers these delivery firms can hold makes it a difficult deal to turn down. But resentment from small business restaurant owners, angry at being wholly dependent on tech companies, is growing. Most restaurants would prefer that customers come in and pick up their orders themselves because they do not have to pay the 30% commission. Restaurant profit margins are small, and the effects of a 20% fall in the external value of the pound since 2016 on food costs are significant, given that over half of their food and drink is sourced outside the UK.

(Source: adapted from https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 https://www.ft.com/content/edf8a144-a101-4ef8-80e3-7d2f1565d35c and https://www.thisismoney.co.uk/money/markets/article-8138703/Uber-set-sell-takeaway-division-rival-Deliveroo-two-years.html and https://www.ft.com/content/c20f6848-3c4b-11ea-a01a-bae547046735 and https://www.ft.com/content/bed7c4d8-28c1-11ea-9a4f-963f0ec7e134 and https://www.economist.com/1843/2021/01/26/gulp-the-secret-economics-of-food-delivery)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

1 (a) Using the information provided, explain **one** externality that arises in the food delivery market.

(5)

(b) With reference to Extract B, examine whether the demand for delivered food is price inelastic **and** income elastic.

(8)

(c) With reference to Extract C, discuss the likely effects of increasing integration within the food delivery market.

(12)

EITHER

(d) Evaluate the microeconomic and macroeconomic effects of a depreciation of the pound. Refer to restaurants or other food delivery services in your answer.

(25)

OR

(e) Evaluate the microeconomic and macroeconomic effects of significant increases in the minimum wage. Refer to restaurants or other food delivery services in your answer.

(25)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

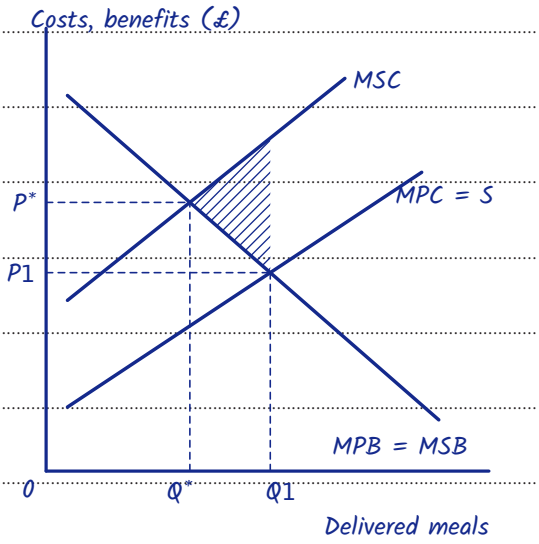
(a) Using the information provided, explain **one** externality that arises in the food delivery market.

(5)

An externality is a cost or benefit that falls on a third party outside the market transaction, so that social costs differ from private costs.

In food delivery a negative externality arises from packaging waste. Extract B says the UK's 200 million delivered meals a year use around 1.4 billion individual pieces of plastic for heat retention and protection while travelling. Much of this single-use plastic is hard to recycle, so it ends up in landfill or as litter, imposing clean-up costs on councils and taxpayers and harming wildlife. Neither the delivery firm nor the customer pays these costs, so the marginal social cost (MSC) of delivered meals is above the marginal private cost (MPC).

As the diagram shows, the market produces where MPC = MPB at Q1, which is greater than the social optimum Q^* where MSC = MSB, so delivered meals are over-produced and over-consumed and the shaded triangle is the welfare loss. This is a market failure. Delivery vehicles add to the external cost through congestion and air pollution.



DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(b) With reference to Extract B, examine whether the demand for delivered food is price inelastic **and** income elastic.

(8)

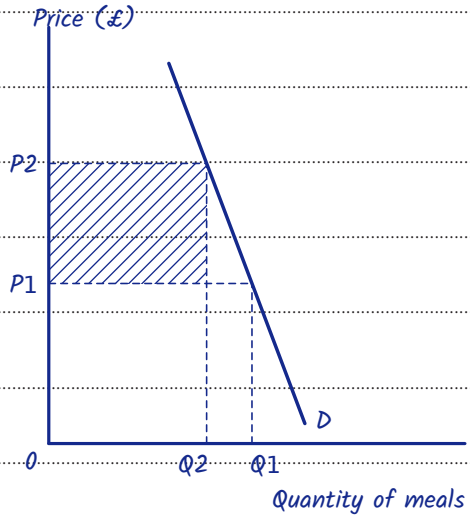
Demand is price inelastic when a percentage change in price causes a proportionately smaller percentage change in quantity demanded (PED between 0 and −1). Demand is income elastic when a percentage change in income causes a proportionately larger percentage change in demand (YED greater than +1), which is typical of luxury goods.

There is evidence that demand is price inelastic. Delivered food is about five times more expensive than cooking at home, yet the industry has boomed, so consumers are not very sensitive to price. The £5 delivery fee is a very small percentage of the income of 'cash rich, time poor' professionals, ordering through a convenient mobile app saves time, and food high in fat, sugar and salt is habit forming, all of which make demand less responsive to price. The market is dominated by three firms offering very similar services, Just Eat, Uber Eats and Deliveroo, so there are few close substitutes for app delivery. As diagram 1 shows, if demand is price inelastic, a rise in price from P1 to P2 causes a proportionately smaller fall in quantity from Q1 to Q2, so the firms' total revenue rises by the hatched area.

Demand also appears income elastic. Delivered meals are a luxury bought mainly by cash rich professionals, and income growth before 2020 meant the industry boomed. As incomes rise, demand shifts right from D to D1 by a proportionately larger amount (diagram 2), so the firms benefit in times of economic growth but lose demand in a recession.

However, this depends on the comparison made. The 30% of the price paid by restaurants is not seen by the consumer, so the price consumers face understates the true cost. Compared

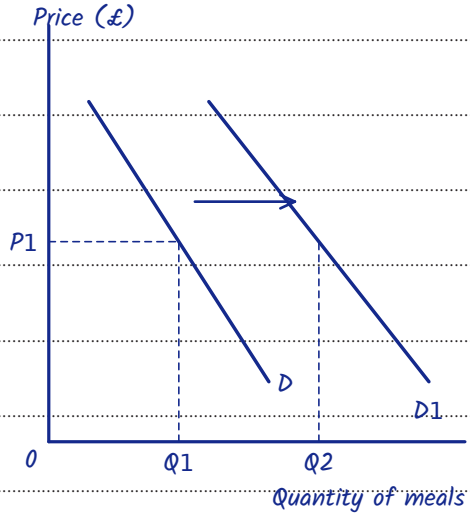
Diagram 1: PED inelastic



DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

with eating in a restaurant, which costs the same, delivered food may be an inferior good: when incomes fall, people may switch from restaurant meals to delivery, so demand rises. For lower income groups, such as students, a £15 meal plus £5 fee takes up a larger percentage of income, so their demand is more price elastic. Elasticity also differs between geographical areas, as rural households have fewer delivery options than urban ones. Finally, the worldwide health crisis distorted the data: eating in restaurants was impossible, so the boom may reflect a lack of substitutes rather than rising incomes.

Diagram 2: income rises



Overall, demand is likely to be price inelastic and income elastic for high income urban professionals, but not for all consumers.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

(c) With reference to Extract C, discuss the likely effects of increasing integration within the food delivery market.

(12)

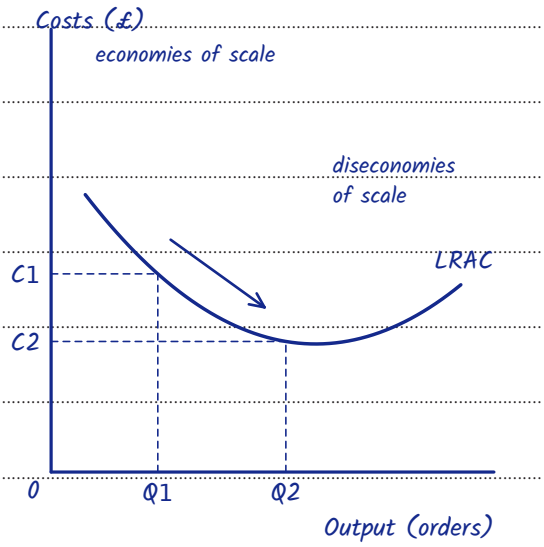
Integration is the joining of two or more firms through a merger or takeover. Horizontal integration joins firms at the same stage of production in the same industry, such as Just Eat merging with Takeaway.com in 2020 and buying Grubhub in the US, with 20 million active users. Amazon's purchase of 16% of Deliveroo is a partial integration with a firm from a different but related industry, closer to conglomerate integration.

The main benefit is economies of scale. A larger firm can spread the high fixed costs of developing its app and advertising over more orders, and Amazon brings technical and marketing economies: its expertise in efficient delivery could let drivers carry several orders on one trip, as food delivery is often uneconomical when a single household places a single order from a single restaurant. As the diagram shows, output rises from Q1 to Q2 and long run average cost falls from C1 to C2. Lower costs could be passed on to consumers as lower delivery fees, and supernormal profit can be invested in better technology, improving dynamic efficiency. For Deliveroo, external investment was essential: the CMA agreed because Deliveroo would otherwise have closed down, which would have reduced competition further.

However, integration increases market concentration and monopoly power. Just Eat already has 67.3% of the UK market and, with Deliveroo (21.3%) and Uber Eats (10.2%), the three-firm concentration ratio is 98.8%. Greater market power allows firms to set prices above marginal cost, so consumers face higher fees and reduced choice, causing allocative inefficiency and a loss of consumer surplus. Just Eat's aggressive pricing, undercutting delivery fees below the average cost of rivals, looks like predatory pricing that removes competition by forcing rivals to merge or leave, after which prices may rise. The scale and network effects of the large platforms also create high barriers to entry for new firms.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Integration also increases monopsony power over restaurants and drivers. Restaurants are wholly dependent on the platforms because of their volume of customers, so the platforms can keep or raise the 30% commission, squeezing restaurant profit margins that are already small and hit by higher food costs since the 20% fall in the pound.



Drivers, classed as independent contractors, may see pay fall further, already as low as £1 an hour in 2020. Large international firms may also use transfer pricing to avoid UK taxes.

The effects depend on several factors. The CMA is watching to prevent any one firm having complete control and can block mergers or set conditions, as shown by the year it took to agree the Amazon deal. Lower costs only benefit consumers if competition remains; if the market is contestable, the threat of entry keeps prices down. If firms grow too large they may suffer diseconomies of scale, such as communication problems across several countries, so average costs rise beyond the minimum point of LRAC.

Amazon also failed with its own delivery company in 2018, so efficiency gains are not guaranteed. Restaurants can respond by encouraging customers to collect orders themselves to avoid the commission.

Overall, integration is likely to lower costs and was necessary for Deliveroo's survival, but in the long run the main risk is higher prices for consumers and restaurants as market power grows, so effective regulation by the CMA is crucial.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

EITHER

(d) Evaluate the microeconomic and macroeconomic effects of a depreciation of the pound. Refer to restaurants or other food delivery services in your answer.

(25)

OR

(e) Evaluate the microeconomic and macroeconomic effects of significant increases in the minimum wage. Refer to restaurants or other food delivery services in your answer.

(25)

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Chosen question number: **Question 1(d)** ☒ **Question 1(e)** ☒

Write your answer here:

Question 1(d)

A depreciation is a fall in the value of the pound against other currencies in a floating exchange rate system. Extract C states that the external value of the pound has fallen by 20% since 2016, and over half of restaurants' food and drink is sourced from outside the UK.

At a microeconomic level, the depreciation raises the sterling price of imported food, wine and equipment, so restaurants' costs of production rise. With small profit margins and a 30% commission paid to delivery firms, restaurants face a squeeze: average and marginal costs shift up, so a profit-maximising restaurant raises prices and reduces output, and its profits fall. Some small independent restaurants may close. Consumers face higher prices for restaurant and delivered meals, so consumer surplus falls, and those on fixed incomes, such as pensioners and students, have lower real incomes and standards of living. If demand for delivered food is income elastic, falling real incomes shift demand left, reducing orders for Just Eat and Deliveroo and the pay of drivers paid per delivery. Restaurants may instead begin to use more locally produced food, which benefits UK farmers and suppliers.

There are also gains. Workers in exporting firms in other industries, such as

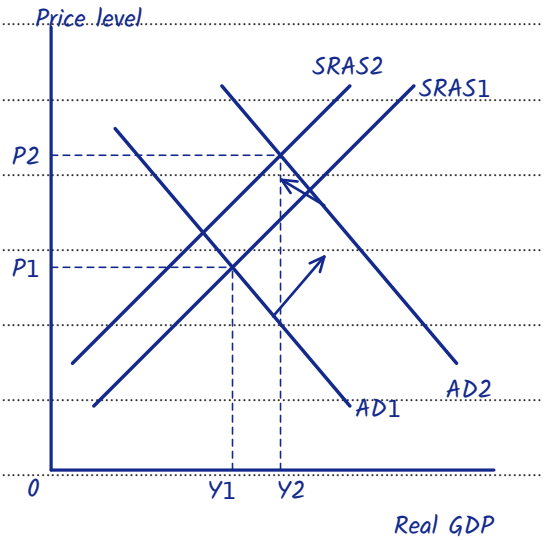
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

manufacturing, see higher demand and incomes, so they may use more delivery services.

A cheaper pound makes the UK more attractive to foreign tourists, boosting demand for local restaurants. Multinationals such as Just Eat, which bought Grubhub in the US, earn revenue in dollars and euros that is worth more in pounds, raising their profits.

At a macroeconomic level, UK exports become cheaper abroad and imports dearer, so net exports (X – M) rise. As exports are an injection and imports a withdrawal, AD shifts right from AD1 to AD2 with a multiplier effect, raising real GDP and employment, as the diagram shows, and the current account deficit should narrow. Capital inflows may rise as UK assets become cheaper for foreign investors, such as Amazon investing in Deliveroo, which raises investment, shifting AD and, in the long run, LRAS outwards.

However, higher prices of imported food, fuel and raw materials cause cost-push inflation: SRAS shifts left from SRAS1 to SRAS2, so the price level rises from P1 to P2. Combined with demand-pull pressure from higher AD, inflation may rise above the 2% target, cutting real wages and possibly causing the Bank of England to raise interest rates. This is regressive, as poorer households spend a larger share of income on food. Multinationals also have an incentive to use transfer pricing to move profits between countries.



The size of these effects is uncertain. The Marshall-Lerner condition states that a depreciation only improves the current account if the sum of the price elasticities of demand for exports and imports is greater than one. In the short run demand is inelastic because contracts are fixed, so the current account worsens before it improves, the J-curve effect. Many food imports cannot be grown in the UK and have few substitutes, so spending on imports may rise rather than fall.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

The impact also depends on the nature of the restaurant. Food costs are small relative to other costs such as rent, wages and the 30% delivery commission, so a 20% rise in imported food prices raises total costs only slightly. Restaurants specialising in UK food or using locally sourced ingredients face a very low cost effect, while those relying on imported ingredients face more. Firms can offset costs by altering portion sizes or changing menu options rather than raising prices. There are regional differences too, depending on whether there is a local food supply option.

Moreover, the pound has recovered significantly since 2016, and the fall was larger against some currencies than others, so the trade-weighted depreciation is smaller. Other factors, such as heavy fiscal spending in response to the global health crisis and restaurant closures during lockdowns, have had far bigger effects. The boost to tourism is small relative to the increase in food costs, and capital inflows depend on other factors such as interest rates and confidence.

In conclusion, the depreciation has mainly harmed restaurants and food delivery firms in the short run through higher costs and lower real incomes, while the macroeconomic gains from higher net exports are delayed by the J-curve and depend on Marshall-Lerner holding. For most restaurants, cost-push effects are likely to outweigh the gains, but the overall impact depends on how much they rely on imports and how long the depreciation lasts.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Question 1(e)

A minimum wage is a legal price floor on wages set above the market equilibrium wage.

In 2021 the National Living Wage rose by 2.2% to £8.91, after a 6.2% rise in 2020, and lowering the eligibility age to 23 gave an additional 7.5% of 23 to 25-year-olds an 8.7% pay rise of 71p an hour (Extract A).

At a microeconomic level, the diagram shows the market for low-skilled hospitality workers. Raising the minimum wage from W1 to Wmin increases the quantity of labour supplied from Q1 to Qs but reduces the quantity demanded to Qd, a contraction of labour demand that creates an excess supply of labour (unemployment) of Qs – Qd.

Very low paid workers who keep their jobs gain higher incomes. However, restaurants are labour intensive, so wages are a large proportion of costs: average and marginal costs shift up, already small profit margins fall, and prices rise for consumers, so output and consumer surplus fall. Firms may replace workers with capital, such as ordering screens and apps, so the fall in employment is larger in the long run. The minimum wage distorts the price mechanism, so resources may be allocated inefficiently.

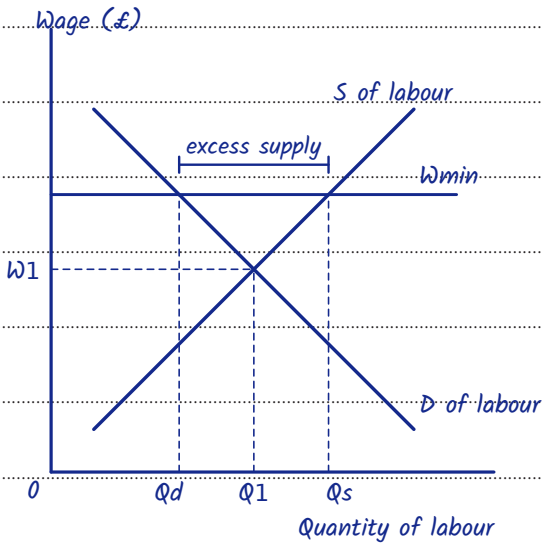
For food delivery firms, if minimum pay legislation is widened to contracted workers as Extract B suggests, drivers who earned as little as £1 an hour in 2020 would gain substantially, but Deliveroo and Just Eat would face higher costs and might raise the £5 delivery fee or offer fewer flexible shifts. Higher pay may raise productivity and motivation and reduce labour turnover, as efficiency wage theory suggests, offsetting some of the cost increase.

At a macroeconomic level, higher wages raise the incomes of low-paid households, who have a high marginal propensity to consume, so consumption rises and AD shifts right with a multiplier effect. Relative poverty falls and income inequality improves: the Lorenz curve moves closer to the line of equality and the Gini coefficient falls. The government gains higher income tax revenue and pays lower in-work and unemployment related

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

benefits, improving the fiscal position.

On the other hand, higher wage costs shift SRAS to the left, causing cost-push inflation as restaurants raise menu prices. If profits fall, investment falls, reducing AD and in the long run shifting LRAS to the left. If firms cut jobs, unemployment rises among young and low-skilled workers, raising benefit spending, and international competitiveness worsens if unit labour costs rise faster than productivity.



The effects depend on the size of the increase. A 2.2% rise, close to inflation, changes real wages little, whereas a significant rise such as the 8.7% increase for 23 to 25-year-olds is more likely to cause job losses. The effect on employment depends on the elasticity of demand for labour and the degree to which labour can be replaced with capital. If demand for restaurant meals and food delivery as a whole is price inelastic, firms can pass higher costs on to consumers, so demand for labour is inelastic and few jobs are lost; the PED and PES in the factor and product markets matter.

The effect on firms depends on how much wage costs are as a proportion of overall costs: high for restaurants, but delivery platforms using self-employed contractors are not affected unless the law is widened. Consumers might also have increases in wages, so demand for meals rises and profits might not fall. Yet some firms will face decreased demand and go out of business, with a loss of jobs and other economic activity.

At a macro level, the impact on real output depends on the level of spare capacity, the elasticity of LRAS and the size of the multiplier. Higher wages may encourage economically inactive workers, such as students, to enter the labour force to look for jobs, raising LRAS. Higher tax revenue may not occur if unemployment increases or investment

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

decreases, and unemployment related benefits would rise. Where employers have monopsony power, as large delivery platforms may over drivers, a minimum wage can raise both pay and employment.

In conclusion, significant increases in the minimum wage benefit low-paid workers and reduce inequality and relative poverty, but they risk higher prices, lower profits and job losses in labour-intensive sectors such as restaurants. The net effect depends on the elasticity of demand for labour and the state of the economy, so gradual increases linked to productivity are likely to bring the benefits with the fewest costs.

(Total for Question 1 = 50 marks)

TOTAL FOR SECTION A = 50 MARKS

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

SECTION B

Read Figure 2 and the following extracts (D to G) before answering Question 2.

Answer ALL Questions 2(a) to 2(c), and EITHER Question 2(d) OR 2(e).

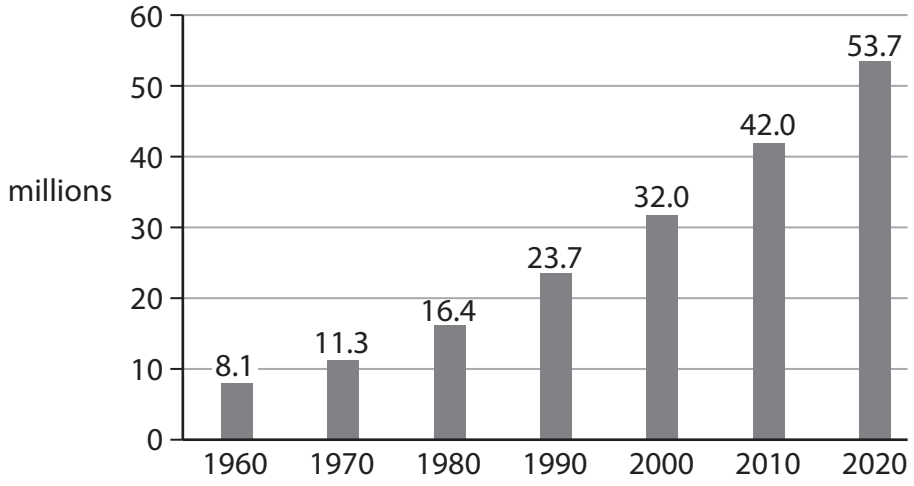
Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 2

Sub-Saharan Africa – growth and development

Figure 2: Kenya population, millions, 1960 to 2020



(Source: adapted from Population, total - Kenya | Data (worldbank.org))

Extract D

Growth and development in Africa: 'Africa has a massive opportunity as a low-cost provider of services'

The outlook for Africa's economies is not as simple as the Lewis model of growth and development implies: do more manufacturing or stay poor. Many countries are expanding into areas that economists are starting to call 'industries without smoking chimneys'. Some, such as flower-exports, may not be classified as manufactured goods in export statistics. But the process of producing flowers looks a lot like factory work and demands many of the same management skills. These industries also deliver many of the benefits of normal manufacturing, including many well-paid jobs, and greater opportunities.

(Source: adapted from https://www.economist.com/special-report/2020/03/26/many-of-africas-economies-are-doing-well)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Extract E

The demography of Kenya – 'Demography will shape Africa's future'

Falling birth rates, when accompanied by rising literacy, can help kick-start growth. In Kenya 39% of the population is below the age of 15, falling from 43% in 2009. The labour force (15–64 years) is 57% and is the fastest growing population group. 6% of the population is over the age of 60. The number of children per family has fallen sharply, from 8.1 children in 1978 to 4.6 children in 2008, and it is projected to possibly reach 2.4 children by 2050.

In the 1970s little more than half of children in sub-Saharan Africa were enrolled in primary school. That share has shot up to almost 100%. The statistic is slightly misleading, since the percentage of children regularly attending schools is nearer 60%.

Why does Kenya's population continue to rise rapidly, while family size declines? There are two reasons. First, due to high fertility in previous decades, there are many more families in Kenya today. So even though families are smaller, the total number of children continues to grow. Second, Kenyans are living longer, with better healthcare – for example, polio was eradicated in 2014. Life expectancy is projected to increase from 54 years today to 68 years by 2050.

28% of Kenya is urbanised, and is becoming rapidly more so. By the 2030s it is expected that 36% of Kenyans will live in towns or cities rather than the poorer rural areas. Rich countries are urban countries. No country has ever reached high income levels with low urbanisation. Large urban centres have two distinct economic advantages. First, as more people interact, there is more scope for innovation. Young people need jobs, but they also create jobs. Kenya has an educated workforce and a dynamic service industry, which typically has lower barriers of entry than agriculture or manufacturing, and provides opportunities for young entrepreneurs. Second, larger groups of population living in close proximity allow for economies of scale.

In light of these facts, Kenya's future pattern of population growth can be a force of good. A large urbanising and well-educated population tends to generate a strong middle class and vibrant private sector. Economic development may be easier to achieve and sustain – though it is not guaranteed.

(Source: adapted from https://www.economist.com/special-report/2020/03/26/africas-population-will-double-by-2050 and https://kenya.unfpa.org/sites/default/files/pub-pdf/state_of_kenya_population_report_2020.pdf and https://www.worldbank.org/en/news/opinion/2010/04/28/demographic-transition-growth-kenya)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Extract F

Kenya has an absolute advantage in cut flowers

In the UK, 80% of cut flowers come via the Netherlands, although a significant proportion come from Kenya. Some Kenyan flowers come straight to the UK on direct flights from Nairobi, where entire terminals at certain airports are dedicated to flights exporting flowers.

Kenya flower production has three major advantages over the Netherlands: areas of high altitude with cool nights, which many flowers benefit from, proximity to the equator for maximum hours of sunlight, and cheaper labour. This means an end to seasonal production and the beginning of a 365-day-a-year absolute advantage. The Netherlands has cost advantages in machinery and transport equipment, not flowers.

Cut flowers are now Kenya's second largest export after tea, contributing around 1% of the country's GDP. They are also one of the country's largest sources of employment, with over 100 000 people working directly in the flower industry and an estimated two million indirectly.

(Source: adapted from: https://www.economist.com/middle-east-and-africa/2021/02/11/kenyas-floral-exports-are-blooming-once-more)

Extract G

Changes in interest rates in sub-Saharan Africa

When Robert Matsiko was a young man his grain-milling business in eastern Africa was destroyed by fire. Now, after building it back up from the ashes, he is being hurt by high interest rates. To buy a new machine he must borrow from a bank at an annual rate of 22%. 'You fear to do that,' Mr Matsiko says. Many other entrepreneurs feel the same, which stops their businesses from growing, although very small firms can get help from microfinance schemes.

Kenya's central bank rate has fallen from over 20% to 7% in the last decade, but the rates charged to small businesses and individuals are much higher than the central bank interest rate. In sub-Saharan Africa, the gap between saving and borrowing rates is higher than anywhere else. The average bank lends at 6.8% above the central bank interest rate. Mobile banking, credit-information sharing and innovation have helped to bring borrowing costs down. But until birth rates fall, interest rates will stay relatively high, because families with many children cannot afford to save.

(Source: adapted from https://www.economist.com/finance-and-economics/2020/05/21/why-interest-rates-are-so-high-in-africa)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

2 (a) Explain what is meant by the Lewis model. Refer to Extract D in your answer.

(5)

(b) Examine **two** demographic factors influencing development in Kenya.

(8)

(c) Using the example of cut flowers (Extract F), discuss how the concept of absolute advantage may lead to growth in Kenya. Use numerical or diagrammatic analysis in your answer.

(12)

EITHER

(d) Evaluate the microeconomic and macroeconomic effects of decreasing interest rates in Kenya, or another developing country of your choice.

(25)

OR

(e) Evaluate the microeconomic and macroeconomic strategies that could be used to promote development in Kenya, or another developing country of your choice.

(25)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

(a) Explain what is meant by the Lewis model. Refer to Extract D in your answer.

(5)

The Lewis model is a dual-sector model of structural change in which a developing economy grows by transferring surplus labour from a low-productivity traditional agricultural sector to a high-productivity modern industrial sector, usually through rural to urban migration.

In rural agriculture there is so much labour relative to land that, because of diminishing returns, the marginal product of labour is close to zero, so workers can leave with very low opportunity cost and no fall in agricultural output. Urban manufacturing firms pay a wage slightly above subsistence, attracting migrants; their profits are reinvested in capital, raising productivity, so the industrial sector keeps growing and everyone becomes better off.

Extract D summarises this as 'do more manufacturing or stay poor'. However, it argues the outlook is not that simple: 'industries without smoking chimneys' such as Kenya's flower exports are agricultural, yet the process looks like factory work, needs similar management skills and delivers many well-paid jobs, so growth can come from high-value agriculture and services, not only manufacturing.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

(b) Examine **two** demographic factors influencing development in Kenya.

(8)

One demographic factor is the falling birth rate and family size. The number of children per family fell from 8.1 in 1978 to 4.6 in 2008 and may reach 2.4 by 2050, and the share of the population under 15 has fallen from 43% in 2009 to 39%. The working-age population (15 to 64) is 57% and is the fastest growing group, while only 6% are over 60, so the dependency ratio is falling. With more people of working age relative to those who depend on them, income per head and living standards can rise. Smaller families can also save more, increasing the funds available for investment and helping to bring down interest rates (Extract G), so more firms can set up. This improves development, not just growth, because more can be spent on each child's health and education.

A second factor is rising life expectancy due to better healthcare: polio was eradicated in 2014, and life expectancy is projected to rise from 54 years today to 68 years by 2050. A healthier population loses fewer working days and has higher labour productivity, raising incomes and employment opportunities. Longer life is itself a key part of development, measured in the HDI, and people who expect to live longer have more incentive to invest in education, raising human capital and literacy.

However, the population is still rising very rapidly. Figure 2 shows Kenya's population rising from 23.7 million in 1990 to 53.7 million in 2020, an increase of about 127%, because high fertility in previous decades means there are many more families today. Unless enough jobs are created, a larger workforce could mean more unemployment and pressure on schools and health services. The changes will be seen only over time, and longer life expectancy could create a demographic time bomb when today's large working generation is over 60.

Overall, the falling birth rate is probably the more significant factor because it lowers the dependency ratio and raises saving now, but its effect depends on combining the two factors with education and job creation.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(c) Using the example of cut flowers (Extract F), discuss how the concept of absolute advantage may lead to growth in Kenya. Use numerical or diagrammatic analysis in your answer.

(12)

A country has an absolute advantage when it can produce more of a good than another country with the same resources, so at a lower average cost. Kenya has an absolute advantage in cut flowers over the Netherlands because of high altitude with cool nights, proximity to the equator giving maximum sunlight, and cheaper labour, while Dutch flowers need heated greenhouses.

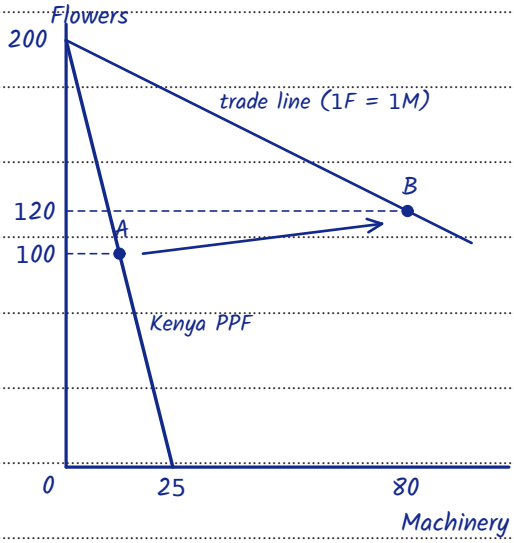
	Per unit of resources		Before (1 unit each)		After specialising		After trade 1F = 1M	
	Flowers	Mach.	Flowers	Mach.	Flowers	Mach.	Flowers	Mach.
Kenya	100	25	100	25	200	0	120	80
Netherlands	25	100	25	100	0	200	80	120
World total			125	125	200	200	200	200

In the table each country has 2 units of resources. Kenya can produce 100 flowers or 25 machinery per unit and the Netherlands 25 flowers or 100 machinery, so Kenya has an absolute advantage in flowers. Before specialisation each country splits its resources equally, so world output is 125F and 125M. If Kenya specialises fully in flowers and the Netherlands in machinery, world output is 200F and 200M, a gain from trade of 75F and 75M. Trading at terms of trade of 1F = 1M, which lies between the opportunity cost ratios (1F = 0.25M in Kenya, 1F = 4M in the Netherlands), Kenya exports 80F for 80M and consumes 120F and 80M, more of both goods than its 100F and 25M before. As the diagram shows, trade lets Kenya consume at point B, beyond its PPF, rather than at point A, which is like an outward shift of its PPF.

This leads to growth in several ways. Higher flower exports raise X in AD, increasing real GDP through the multiplier effect. Cut flowers are Kenya's second largest export after tea, contributing around 1% of GDP, and the 365-day-a-year absolute advantage ends seasonal

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

production, so output and export earnings continue all year. The industry employs over 100 000 people directly and an estimated two million indirectly, raising incomes and consumption. Expanding output allows Kenya to benefit from economies of scale, lowering average costs further, while export earnings provide foreign currency to import capital goods, increasing investment and shifting the PPF outwards in the long run.



However, the gains may be limited. Flowers contribute only around 1% of GDP, so the effect on growth is small compared with other factors, such as the 22% interest rates faced by small businesses (Extract G). The model assumes no transport costs or trade barriers, but flowers must be flown to Europe, and the global health crisis reduced international flights, raising costs. If energy costs change, for example if Dutch growers switch to cheaper renewable heating, Kenya's absolute advantage could be eroded. Large supermarket buyers have monopsony power and can push prices down, and 80% of UK cut flowers come via the Netherlands, so much of the value may be captured outside Kenya.

The model also assumes constant returns to scale, perfect factor mobility and that average costs can be easily compared, and moving resources from one type of production to another takes time in the short run.

Overall, absolute advantage in cut flowers can contribute to growth through exports, jobs and economies of scale, but the effect is modest and Kenya needs to diversify to avoid over-dependence on a few primary exports.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

EITHER

(d) Evaluate the microeconomic and macroeconomic effects of decreasing interest rates in Kenya, or another developing country of your choice.

(25)

OR

(e) Evaluate the microeconomic and macroeconomic strategies that could be used to promote development in Kenya, or another developing country of your choice.

(25)

Indicate which question you are answering by marking a cross in the box ☒. If you change your mind, put a line through the box ☒ and then indicate your new question with a cross ☒.

Chosen question number: **Question 2(d)** ☒ **Question 2(e)** ☒

Write your answer here:

Question 2(d)

Interest rates are the cost of borrowing and the reward for saving. Kenya's central bank rate has fallen from over 20% to 7% in the last decade (Extract G), although the average bank lends at 6.8% above the central bank rate and small firms such as Mr Matsiko's pay 22%.

At a microeconomic level, lower interest rates reduce firms' interest payments, a fixed cost, so average costs fall and profits rise, making firms more competitive. More investment projects become profitable, so entrepreneurs such as Mr Matsiko can buy new machinery, raising productivity and allowing small firms to grow and gain economies of scale. Greater credit lets firms invest in research and new technology, improving dynamic efficiency. Because labour is a derived demand, expanding firms hire more workers, raising employment and wages. Flower farms could invest in greenhouses and cold storage, increasing exports, and lower costs may mean lower prices for consumers.

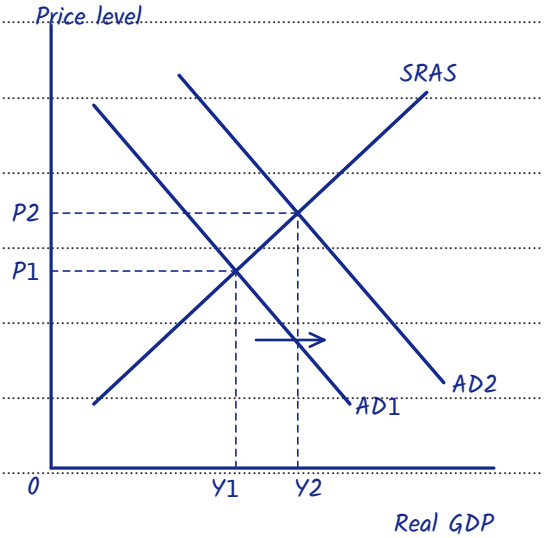
Households face lower loan repayments, increasing disposable income, so consumer demand rises and consumer surplus increases. Demand for housing increases, raising house prices in Kenya's fast-growing cities, which benefits owners but makes housing less affordable for young people moving to urban areas. Savers receive a lower return, so

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

income is redistributed from savers and lenders to borrowers.

At a macroeconomic level, easier borrowing increases consumption and investment, shifting AD to the right from AD1 to AD2, and through the multiplier effect real GDP rises from Y1 to Y2 and unemployment falls, as the diagram shows. Lower interest rates also reduce the cost of financing the public deficit and debt, freeing revenue for spending on schools, health care and infrastructure. Hot money outflows cause the Kenyan shilling to depreciate, making exports such as flowers and tea more price competitive and improving the current account of the balance of payments.

In the long run, if investment continues to grow, the capital stock rises and LRAS shifts right, increasing productive potential and allowing non-inflationary growth, more jobs and a growing middle class, which supports development. However, if AD rises when there is little spare capacity, demand-pull inflation occurs (P1 to P2), and a weaker shilling raises import prices, causing cost-push inflation that reduces the real incomes of the poor.



The most important limitation is that the central bank rate is not the rate that individuals and small businesses can access. Banks lend on average 6.8% above it and Mr Matsiko still faces 22%, so a cut may barely change the cost of credit. Asymmetric information in credit markets means banks cannot judge the risk of small borrowers, so they charge high rates or ration credit, and people without assets or collateral may still be unable to borrow. Lower saving may even reduce the funds available, so less credit is available. Microfinance, mobile banking and credit-information sharing may do more to reduce borrowing costs than cuts in the central bank rate.

The impact on real output depends on the level of spare capacity and on other

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

components of AD: if confidence is low, firms will not borrow even at lower rates ('You fear to do that'). Interest costs may be a small percentage of overall costs for many firms. Loans at fixed interest rates are unaffected in the short run, and there are time lags of up to two years. The exchange rate effect depends on what other countries' interest rates are, and Kenya's rates are already low compared with other sub-Saharan countries. Many Kenyans work in the informal sector without bank accounts, so the transmission mechanism is weak. Extract G also suggests rates will stay high until birth rates fall, so demography may matter more than policy.

In conclusion, lower interest rates can boost investment, growth and development in Kenya through both micro and macro channels, but the magnitude depends on whether lower central bank rates are passed on to small businesses and households. Combining rate cuts with microfinance and better credit information is likely to be the most effective approach.

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Question 2(e)

Economic development is an improvement in living standards and welfare, including income, health, education and freedom, often measured by the HDI. Kenya's life expectancy is only 54 years and 72% of Kenyans live outside towns and cities, in poorer rural areas, so there is much scope for development.

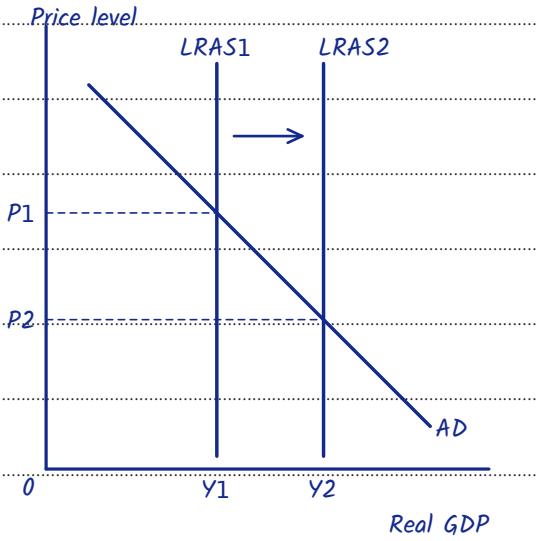
One microeconomic strategy is investment in human capital. Spending on education, such as vocational training at school and measures to improve student attendance (across sub-Saharan Africa enrolment is almost 100% but regular attendance is nearer 60%), raises skills and productivity, increasing wages and job opportunities in Kenya's dynamic service industry. Disease prevention and cures, such as the vaccination that eradicated polio in 2014, raise life expectancy, reduce working days lost and improve the HDI directly. Information and health assistance can lower the birth rate, reducing the dependency ratio and allowing families to save.

Infrastructure, such as roads, power, mobile networks and airport improvements, cuts firms' costs; flower firms already benefit from dedicated airport terminals and direct flights from Nairobi. State provision or tax relief for firms that create jobs, and microfinance for entrepreneurs who cannot borrow at 22% (Extract G), allow small businesses to grow and help the poor set up enterprises. Government intervention such as a minimum wage or subsidies could raise the incomes of flower workers, though it may reduce employment.

At a macroeconomic level, trade liberalisation lets Kenya exploit its absolute advantage in cut flowers and tea, raising exports, AD and GDP, with over 100 000 direct and two million indirect jobs in flowers. Exporting directly to the UK rather than via the Netherlands, through which 80% of UK cut flowers come, would let Kenya keep more of the value. Increasing FDI by shoring up capital markets, protecting property rights and keeping macroeconomic stability brings capital, technology and skills, shifting LRAS right

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

from LRAS1 to LRAS2 (diagram), so real GDP rises from Y1 to Y2 without inflation.



Aid and debt relief can fund schools, hospitals and infrastructure, filling the savings gap described by the Harrod-Domar model, and lower debt repayments free revenue for public services. Privatisation and deregulation can raise efficiency, as the private flower industry shows. Fiscal policy such as progressive taxes and targeted transfers can reduce inequality, and supporting urbanisation, with 36% of Kenyans expected to live in towns by the 2030s, brings economies of scale and innovation, since no country has reached high income with low urbanisation.

However, each strategy has limits. Education and health spending have long time lags and need funding Kenya may lack, and if children are needed as a social insurance policy for old age, families may keep having many children whatever health information they receive. Aid can create dependency, be lost to corruption or come with conditions, and debt relief may encourage further borrowing. Multinationals may repatriate profits, use transfer pricing and pay low wages, limiting the benefits of FDI. Trade liberalisation risks over-dependence on primary products such as flowers and tea, whose prices are volatile and whose terms of trade may decline (Prebisch-Singer), while supermarket buyers have monopsony power.

Market-based strategies may widen inequality, while interventionist strategies risk government failure through corruption and poor information. The global health crisis affected poor countries more profoundly, cutting flights and tourism, so external shocks can reverse progress. Comparison with other countries helps: Botswana developed through diamond revenues and good governance, and Bangladesh cut its birth rate through

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

educating women and family planning, suggesting institutions and education matter most.

In conclusion, the most effective strategies for Kenya are investment in human capital and infrastructure, combined with microfinance and trade that builds on its absolute advantage, because they raise both growth and the HDI. Success depends on good governance and sustained funding, so a combination of micro and macro strategies is needed rather than any single policy.

(Total for Question 2 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS
TOTAL FOR PAPER = 100 MARKS

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

BLANK PAGE

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

BLANK PAGE

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

BLANK PAGE