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Candidate surname <i>StemUp Model Solution</i>		Other names
Centre Number	Candidate Number	

Pearson Edexcel Level 3 GCE

Monday 22 May 2023

Afternoon (Time: 2 hours)

Paper reference **9EB0/02**

Economics B

Advanced

PAPER 2: Competing in the global economy

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.
- Answer **all** questions.
- 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.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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Answer ALL questions.

SECTION A

Read the following extracts (A to D) before answering Question 1.

Write your answers in the spaces provided.

Extract A

UK restaurant sector in March 2022

Restaurants face food, wage and energy inflation, while real household incomes are falling. Around 700 chain restaurants have closed since March 2020, according to the *Local Data Company (LDC)*, which monitors chain restaurants. *The Restaurant Group*, which took over Frankie & Benny's, Garfunkel's and Chiquito and *Casual Dining Group*, which took over Café Rouge and Bella Italia, have now closed dozens of their restaurants.

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However, small independent restaurants have stepped into the gaps left by the chains. The number of local restaurants has increased by 3.7% (888) since March 2020, according to *LDC*. Cheaper rents have made it easier for entrepreneurs to start new restaurant businesses.

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(Source: adapted from <https://www.theguardian.com/business/2022/mar/26/uk-casual-dining-covid-independent-restaurants>)

Extract B

The growth of dark kitchens

Imagine a restaurant. Remove the tables, customers and restaurant employees. Replace these with an app and you have a dark kitchen. Dark kitchens are designed exclusively for efficiency; to cook, pack and deliver takeaway meals as quickly as possible. The idea is they help existing restaurant chains reach customers further away from their restaurants, which in turn do not become too busy.

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There has been substantial growth in the number of dark kitchens particularly in London, Manchester and Leeds. They are industrial-scale kitchens, located in warehouses in low-cost areas. While Food Stars, owned by Los Angeles based *CloudKitchens*, is the largest operator of dark kitchens in the UK, another multinational *Deliveroo* launched *Deliveroo Editions* rentable kitchens in 2017. In addition, *Dishoom*, *Rosa's Thai*, *Five Guys* and Chinatown dim sum restaurant, *Tao Tao Ju*, have all entered this market.

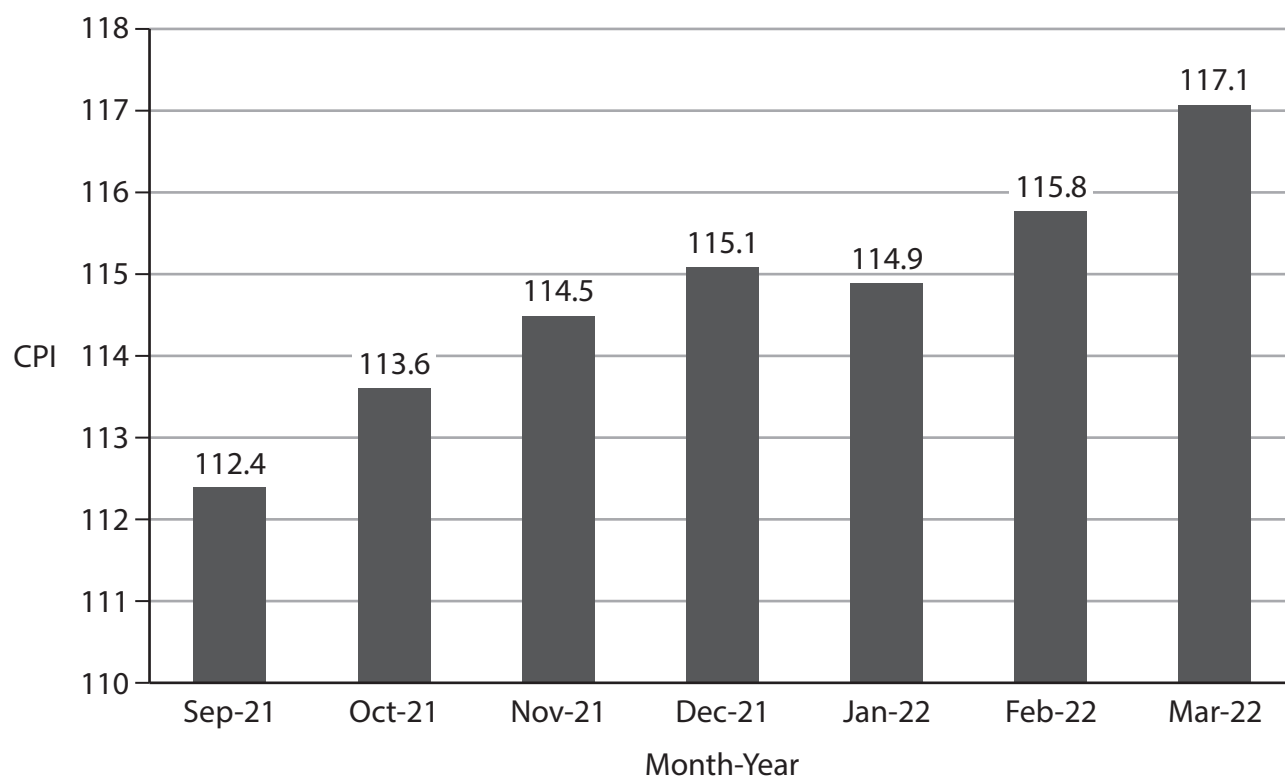
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However, there have been growing concerns about dark kitchen sites being located close to residential areas. These concerns often relate to abuse from delivery drivers and finding ingredients, including raw meat, dumped in the street. There have also been concerns about poor working conditions and low pay for employees in these dark kitchens.

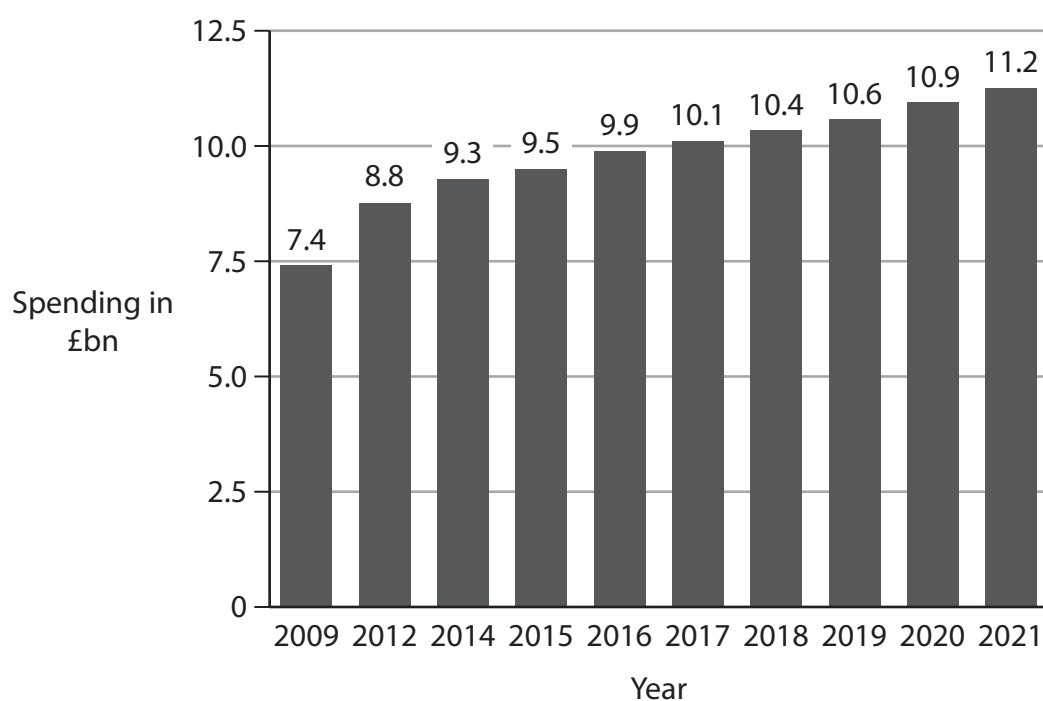
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(Source: adapted from <https://www.theguardian.com/commentisfree/2022/jan/17/dark-kitchens-food-delivery-apps-inside-kitchen-work> and <https://www.timeout.com/london/news/the-mystery-of-londons-dark-kitchens-041322>)



Extract C**UK monthly consumer price index (CPI) September 2021 to March 2022 (2015 = 100)**

(Source: adapted from <https://www.ons.gov.uk/economy/inflationandpriceindices>)

Extract D**Total household expenditure on takeaway meals in the UK 2009, 2012 and 2014 to 2021 (£bn)**

(Source: adapted from <https://www.statista.com/statistics/584999/takeaways-household-spending-united-kingdom-uk/>)

- 1 (a) Using the data from Extract C calculate, to 2 decimal places, the rate of inflation in March 2022.

You are advised to show your working.

(4)

$$\text{Rate of inflation} = ((\text{CPI Mar 2022} - \text{CPI Feb 2022}) \div \text{CPI Feb 2022}) \times 100$$

$$117.1 - 115.8 = 1.3$$

$$1.3 \div 115.8 = 0.0112$$

$$0.0112 \times 100 = 1.12\%$$

$$\text{Rate of inflation in March 2022} = 1.12\%$$



(b) With reference to Extract C, explain in which month there was deflation and in which month there was disinflation.

(4)

Deflation is a fall in the average price level, so the rate of inflation is negative, whereas disinflation is a fall in the rate of inflation, so the average price level is still rising but at a slower rate.

There was deflation in January 2022: the CPI fell from 115.1 to 114.9, so the rate of inflation was negative at $(114.9 - 115.1) \div 115.1 \times 100 = -0.17\%$.

There was disinflation in November 2021: the rate of inflation fell from 1.07% in October to 0.79% in November (113.6 to 114.5). It fell again to 0.52% in December 2021 (114.5 to 115.1), so prices were still rising but more slowly.

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Median nominal annual earnings for full-time employees in the UK increased from £25 806 in 2009 to £31 285 in 2021.

In the same period, there was an increase of 52% in demand for takeaway meals.

- (c) Using this data, calculate, to 2 decimal places, the income elasticity of demand for takeaway meals from 2009 to 2021. You are advised to show your working.

(4)

$$YED = \% \text{ change in quantity demanded} \div \% \text{ change in income}$$

$$\text{Change in income} = £31\,285 - £25\,806 = £5\,479$$

$$\% \text{ change in income} = (£5\,479 \div £25\,806) \times 100 = 21.23\%$$

$$YED = 52\% \div 21.23\% = 2.449$$

$YED = 2.45$ (positive and greater than 1, so takeaway meals are a luxury, income elastic, normal good)



(d) Analyse **two** ways small firms might survive in the competitive restaurant market.

(6)

One way is to offer better customer service rather than trying to compete on price with the large chains. A small independent restaurant can offer more personal table service, so that customers know the staff and the staff know the customers and their preferences. This builds customer loyalty, which may result in increased repeat bookings and word of mouth recommendations, increasing sales revenue and making survival more likely even though the chains have lower average costs.

A second way is product differentiation, creating a unique selling point (USP). Small restaurants can specialise in types of food not provided by the chain restaurants, such as local or authentic regional cuisine. By offering a more unique product, demand becomes more price inelastic, so the small firm may be able to charge higher prices without losing many customers, increasing revenue and profit and making survival more likely. Extract A shows this is working, as local restaurants have increased by 3.7% (888) since March 2020.

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(e) Discuss the possible benefits to takeaway firms of using dark kitchens.

(8)

A dark kitchen is a kitchen with no tables or customers that exists only to cook, pack and deliver takeaway meals ordered through an app. Extract B says they are designed exclusively for efficiency, to cook, pack and deliver takeaway meals as quickly as possible. Faster delivery improves the quality of service, which increases demand and helps takeaway firms gain market share.

Secondly, dark kitchens help existing restaurant chains such as Dishoom, Rosa's Thai and Five Guys reach customers further away from their restaurants, without their restaurants becoming too busy. This widens the market and increases sales volume and turnover, which matters because takeaway spending grew from £7.4bn in 2009 to £11.2bn in 2021 (Extract D).

Thirdly, costs are reduced because dark kitchens are industrial-scale kitchens located in warehouses in low-cost areas of cities, with no front of house staff or expensive high street rents. Industrial-scale production also gives economies of scale, so average unit costs fall, raising profit margins and profitability, or allowing lower prices to increase competitiveness.

However, the benefits may be limited. Lower costs and rentable kitchens such as Deliveroo Editions reduce barriers to entry, so new entrants may be attracted into the takeaway meals market. This would increase competitive pressure on existing takeaway firms and may reduce their prices and profitability in the long run. Firms also depend on delivery apps, which charge high commission. Overall, dark kitchens are likely to benefit takeaway firms in the short run, but the size of the benefit depends on how many firms enter the market.



(f) With reference to Extract A, assess the likely impact of rising inflation on the UK restaurant market.

(10)

Inflation is a sustained rise in the average price level. Extract A shows restaurants are facing food, wage and energy inflation, and Extract C shows the CPI rising from 112.4 in September 2021 to 117.1 in March 2022, with monthly inflation reaching 1.12% in March.

Rising costs of production mean that restaurants may pass these higher costs on to consumers in the form of higher prices. Higher menu prices are likely to reduce the quantity demanded of restaurant meals, especially in the competitive chain market where there are many substitutes and PED is likely to be price elastic, so total revenue would fall.

At the same time, real household incomes are falling because the rate of inflation exceeds increases in nominal incomes. Eating out is a luxury, so YED is likely to be positive and income elastic, meaning a fall in real incomes leads to a more than proportionate fall in demand for restaurant meals. This decrease in demand is made worse by the growth of the takeaway meals market (Extract D), which further reduces demand for restaurant meals.

Alternatively, firms may decide to absorb some or all of these higher costs to keep prices competitive, but this squeezes profit margins and reduces profits. Lower profits have already meant firms such as The Restaurant Group and Casual Dining Group closing dozens of their restaurants and around 700 chain restaurants have closed since March 2020. Rising costs and lower profits may also make it less likely that new firms will be able to enter the market.

However, the impact is not entirely negative. Small independent restaurants have stepped into the gaps left by the chains, with local restaurants increasing by 3.7% (888) since March 2020, and cheaper rents have made it easier for entrepreneurs to

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start new restaurant businesses. Lower rents partly offset the rise in food, wage and energy costs.

The impact of rising inflation also depends upon PED. If PED is inelastic, perhaps because a restaurant is in a niche market with a differentiated product, rising prices may have little impact on demand and revenue may even rise. If PED is elastic, as in the more competitive chain market, rising prices will have more effect on demand.

Similarly, if YED is negative, for example in cheaper restaurants, falling real incomes may increase demand as consumers trade down, increasing their revenue.

Overall, the evidence suggests rising inflation is likely both to reduce demand and to mean lower profits in the UK restaurant market, so more exit is likely, particularly for chains. However, the impact will vary between firms: survival and success depend upon their product differentiation, their capacity to absorb higher costs and their ability to raise prices. It also depends on how long inflation lasts, since a short period of inflation will have a smaller effect than a sustained fall in real incomes.



- (g) With reference to Extract A, assess problems arising from the inorganic growth used by UK restaurant chains such as *The Restaurant Group* and *Casual Dining Group*.

(12)

Inorganic growth is where firms grow externally through mergers and takeovers rather than organically by expanding their own operations. It can be horizontal (in the same sector and stage of production), vertical (backward or forward) or conglomerate (across sectors). The Restaurant Group took over Frankie & Benny's, Garfunkel's and Chiquito, and Casual Dining Group took over Café Rouge and Bella Italia, so both grew inorganically through horizontal integration, controlling a range of restaurant brands.

The aim of this growth is to increase market power and total revenue, reduce average costs through economies of scale, such as bulk buying food and shared marketing, and so increase profitability. To some extent the firms achieved this through the acquisition of several well known brands, which allowed them to grow rapidly. By growing horizontally with differentiated products, they also spread risk within the restaurant sector, since a fall in demand for one brand can be offset by another.

However, Extract A suggests that the inorganic and horizontal growth model has left the firms vulnerable to both demand and supply shocks. Because all their brands are in the same casual dining market, diversification is limited. Falling real household incomes have reduced demand for restaurant meals across all their brands at once, reducing revenue. At the same time, rising food, wage and energy costs have raised costs at every restaurant, reducing profitability, which is why they have now closed dozens of their restaurants.

A further problem is diseconomies of scale. Large groups with many brands and sites face communication and coordination problems, and may lack the flexibility to adapt to a changing market, such as the shift towards takeaways and dark kitchens. Takeovers can also bring culture clashes and high debt used to finance the acquisitions, so

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interest payments rise and leave less money to invest. As a result, average costs may rise above those of smaller rivals, contributing to the closure of around 700 chain restaurants since March 2020.

Furthermore, the closure of many chain restaurants and the resulting fall in rents have reduced barriers to entry for small, independent restaurants. Local restaurants have increased by 3.7% (888) since March 2020, so the chains face more competition from more flexible firms that can offer a more personal and differentiated service.

However, it can be argued that the problems were caused mainly by external shocks such as the pandemic and inflation rather than by inorganic growth itself. Organic growth would not have protected the chains from falling real incomes and rising costs, and the economies of scale of a large group may help it survive while smaller rivals cannot absorb higher costs. The scale of the problem also depends on how well the firms were managed and integrated after the takeovers.

Overall, the method of growth chosen by the restaurant chains was initially successful in allowing the firms to grow rapidly, but it has left them exposed to demand and supply shocks and diseconomies of scale. The main problem is the lack of diversification and flexibility, rather than inorganic growth as such.



- (h) With reference to Extract B, assess potential stakeholder conflicts associated with the growth of dark kitchens.

(12)

Stakeholders are any individuals or groups with an interest in the success or failure of a firm. For dark kitchens these include consumers, employees, owners and shareholders such as CloudKitchens and Deliveroo, and the local community where dark kitchens are located.

The first conflict is between consumers and employees. For consumers, dark kitchens are designed exclusively for efficiency, to cook, pack and deliver takeaway meals as quickly and as cheaply as possible (Extract B). However, this efficiency may be achieved at the expense of employees, as Extract B reports concerns about poor working conditions and low pay. Lower labour costs allow lower prices for consumers, but reduce workers' living standards.

A second conflict is between owners or shareholders and employees. Industrial-scale kitchens designed for efficiency reduce costs and raise profitability, increasing dividends for shareholders of multinationals such as CloudKitchens. Yet higher profits may come from paying low wages and intensifying work, so a gain for owners is a loss for workers.

A third conflict is between owners and the local community. Dark kitchens help existing brands such as Dishoom and Five Guys reach customers further away from their restaurants at low cost, but sites are located close to residential areas. Residents suffer negative externalities from delivery traffic, noise, abuse from delivery drivers and litter, including raw meat dumped in the street. These are external costs to third parties that are not paid for by the firm, so the social cost of dark kitchens exceeds the private cost.

However, the extent of such conflicts may be limited. The conflict with employees depends upon the effectiveness of government enforcement of employment law, including

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working conditions and the National Minimum Wage. Higher productivity in dark kitchens may also allow better working conditions and higher pay, so efficiency need not mean exploitation. The conflict with consumers depends upon the degree to which consumers base their purchasing decisions simply on price and speed of delivery rather than on quality, ethics or other non-price factors; if they care about ethics, owners have an incentive to treat staff well.

The extent of negative externalities depends upon the quality of local infrastructure, including roads and waste management, and on regulation such as planning permission.

In addition, dark kitchens create employment and income in low-cost areas, which may balance out the negative externalities for the local community.

Overall, the most significant conflict is likely to be between owners and employees, since the business model is based on minimising costs. However, the size of each conflict depends on regulation and enforcement, so stakeholder interests can be partly reconciled.

(Total for Question 1 = 60 marks)

TOTAL FOR SECTION A = 60 MARKS



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SECTION B

Read the following extracts (E to G) before answering Question 2.

Write your answer in the space provided.

Extract E

Tesco and Aldi take drastic action to avoid empty supermarket shelves

Shoppers complained about empty supermarket shelves in August 2021. Although *Tesco* previously assured shoppers it had plenty of food and urged customers to shop as normal. *Tesco*, Britain's biggest supermarket, announced a £1 000 bonus for lorry drivers joining its workforce. *Aldi* acted in a similar way and increased the wages of its lorry drivers.

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The payment to *Tesco* drivers which was applied to drivers who joined from 14 July until the end of September, appeared on various advertisements for lorry driver roles on the *Tesco* website. The aim was to maintain frequent deliveries of small quantities of stock to keep the shelves full.

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(Source: adapted from <https://www.manchestereveningnews.co.uk/news/uk-news/tesco-aldi-take-drastic-action-21204833>)

Extract F

Semiconductor shortage shows the pitfalls of 'just in time'

Just in time (JIT) manufacturing is one of the marvels of globalisation. By coordinating the minute-to-minute movements of ships, trains and trucks across continents, car and electronics manufacturers can ensure that the parts arrive as they are needed. However, such lean production methods leave little room for error.

5

Car makers and other firms are now paying the price in production delays, missed sales and damage to reputations because of the semiconductor shortage.

In 2021 the shortage of semiconductors damaged supply chains worldwide. Car factories were idle because of the struggle in locating semiconductors to buy. Consumer electronics makers warned that the shortage was spreading to the production of televisions, household appliances and smartphones.

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(Source: adapted from <https://www.ft.com/content/8fd09156-434c-45c6-8d26-3765b98f1980>)

Extract G

The UK lacks gas storage capacity

The UK stores enough gas to meet the demand of four to five winter days, or just 1% of Europe's total available storage. The Netherlands has capacity more than nine times the UK, while Germany has 16 times UK storage capacity. The low storage levels left the UK far more exposed to higher global prices and the risk of gas shortages in the 2021–2022 winter.

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(Source: adapted from <https://www.theguardian.com/business/2021/sep/24/how-uk-energy-policies-have-left-britain-exposed-to-winter-gas-price-hikes>)

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- 2 Evaluate the impact of just in time (JIT) management of stock on the efficiency and competitiveness of firms.

(20)

Just in time (JIT) management of stock is a 'pull' system of production, where orders or purchases provide the signal for when a product should be made or delivered.

Components and finished goods arrive only as they are needed, which depends upon close relationships with suppliers and frequent deliveries of small quantities. Efficiency means minimising waste and producing at the lowest average cost, while competitiveness is the ability of a firm to sell its products at better prices or quality than rivals.

JIT increases efficiency because firms only produce or store what is required, in the correct quantity and at the correct time. Stock levels of components and work in progress, such as semiconductors for car makers (Extract F), and of finished goods, such as food on supermarket shelves (Extract E), can be kept to a minimum. This reduces storage and warehouse costs, the opportunity cost of money tied up in stock, and the money wasted on unused, damaged or out of date stock, which is important for perishable food in supermarkets like Tesco and Aldi. Productive efficiency improves as average costs fall.

Lower costs increase competitiveness. Firms can use lower average costs either to cut prices and gain market share, or to keep prices the same and increase profit margins, which can be reinvested in research and development or better quality. Extract F calls JIT 'one of the marvels of globalisation', as car and electronics manufacturers coordinate ships, trains and trucks across continents so parts arrive as they are needed. Floor space freed from storage can be used for production or for selling, and JIT encourages lean production and quality control, since faulty parts are noticed immediately.

However, minimal stock levels leave little room for error. If there is a break in the supply chain, production and sales may stop. Extract F shows that in 2021 the

shortage of semiconductors damaged supply chains worldwide: car factories were idle and the shortage spread to televisions, household appliances and smartphones. Car makers paid the price in production delays, missed sales and damage to reputations, so efficiency fell as fixed costs were spread over less output, and competitiveness fell as customers switched to rivals.

Retailers such as supermarkets rely on road distribution for frequent deliveries of small quantities. In August 2021 a shortage of lorry drivers led to empty supermarket shelves (Extract E). To maintain deliveries, Tesco offered a £1 000 bonus for new lorry drivers and Aldi increased the wages of its drivers. These higher labour costs reduce efficiency and profit margins, while empty shelves lose sales to rivals, reducing competitiveness. JIT therefore makes firms more dependent on the labour market and on external suppliers.

With little or no spare stock, firms cannot easily meet sudden increases in demand, and they are vulnerable to price increases for raw materials, because they must buy at current market prices. Extract G shows the UK stores enough gas for only four to five winter days, just 1% of Europe's total storage, compared with nine times as much in the Netherlands and 16 times in Germany. This left the UK far more exposed to higher global prices and the risk of shortages in 2021 to 2022, raising costs for firms and households.

However, the impact of JIT depends on several factors. JIT is a very responsive method of inventory management when supply chains are suitably resourced and integrated into production. The problems in 2021 were caused by unusual shocks such as the pandemic and Brexit labour shortages, so in normal times the cost savings are likely to outweigh the risks. Firms can reduce the risks by investing in supply chains, using several suppliers, holding a small buffer stock of critical components and using forward markets to fix the price of raw materials in advance.



The impact also depends on the industry. For supermarkets selling perishable goods, JIT is essential to reduce waste, and shortages can be solved fairly quickly. For car makers relying on a few overseas suppliers of specialist parts, the risk of a costly stoppage is much greater, so a 'just in case' approach for key components may be more efficient. While JIT can be an efficient form of stock management for many industries, it may not be appropriate for natural gas supply, where reserves of stock are vital to avoid shortages and reduce price fluctuations.

In conclusion, JIT usually increases efficiency and competitiveness by reducing costs, but it makes firms vulnerable to supply chain shocks. The net impact depends on the reliability of suppliers, the nature of the product and the scale of external shocks.

Overall, the benefits outweigh the costs for most firms in the long run, provided they build some resilience into their supply chains rather than relying on pure JIT.

(Total for Question 2 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS



SECTION C

Read the following extracts (H and I) before answering Question 3.

Write your answer in the space provided.

Extract H

Inflation versus economic growth

UK economic growth is expected to match the USA in 2022 but in 2023 it will slump to the bottom of the league table of comparable economies in the G7, the International Monetary Fund (IMF) has said. It will also face the highest rate of inflation.

The data will add to the pressure on the UK Government. Slower growth and higher prices could be even more politically dangerous as energy prices rise again in 2022–2023 winter. Critics of UK Government policy said that the IMF data showed that its macroeconomic policy was wrong and as a result forecast a recession in the second quarter of 2022.

5

(Source: adapted from <https://www.theguardian.com/business/2022/apr/19/imf-cuts-global-growth-forecast-over-ukraine-war>)

Extract I

Sustainability versus economic growth

Many of the world's most 'prosperous' countries are its least sustainable. Since the 1970s, humanity has been in 'ecological overshoot', with annual demand for resources exceeding what the Earth can regenerate each year. Today, humanity uses the equivalent of 1.7 Earths to provide the resources we use. This applies to the vast majority of today's wealthy countries.

5

Even nations such as Norway, with an apparent ecological surplus thanks to widespread use of renewables at home, mask their true carbon footprint by exporting fossil fuels to be burned elsewhere – in so doing, helping to enhance their own prosperity further.

(Source: adapted from <https://www.theguardian.com/global-development/2018/dec/05/climate-change-ranking-prosperity-invites-disaster-henrietta-moore-ucl>)

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- 3 Evaluate the extent to which there is a trade-off between the policy objective of economic growth and the other objectives outlined in Extracts H and I.

(20)

Economic growth is an increase in real GDP over time. Governments also have other macroeconomic objectives, such as low and stable inflation (the UK target is 2% CPI) and, increasingly, environmental sustainability, which means meeting the needs of the present without compromising the ability of future generations to meet their own needs.

A trade-off exists when achieving one objective makes another harder to achieve.

Extract H shows a possible trade-off between growth and inflation. The UK expects growth to match the USA in 2022 but also to face the highest rate of inflation in the G7. If inflation is demand-pull, there is a clear trade-off: rising AD, for example from tax cuts, government spending or low interest rates, shifts AD to the right from AD1 to AD2 (see diagram). Real output rises from Y_1 to Y_2 , but as the economy approaches full capacity the price level rises from P_1 to P_2 . Faster growth therefore causes higher inflation, and policies to reduce inflation, such as higher interest rates, reduce consumption and investment and slow growth.

This can lead to conflicts between fiscal policy and monetary policy. If the government prioritises growth through tax cuts and spending increases, the Bank of England may have to raise interest rates to keep inflation on target, so the two policies work against each other. Extract H also shows that slower growth with higher prices could be politically dangerous, particularly as energy prices rise again in the 2022 to 2023 winter.

However, if the causes of inflation are cost-push, such as higher energy and food prices following the war in Ukraine, the relationship is different. SRAS shifts left, so growth may be low or negative combined with high inflation (stagflation). Extract H forecasts that in 2023 UK growth will slump to the bottom of the G7 while inflation is the highest, so here there is no trade-off: both objectives are missed at the same time. In this case faster growth from supply-side policies, which shift LRAS to the right, could

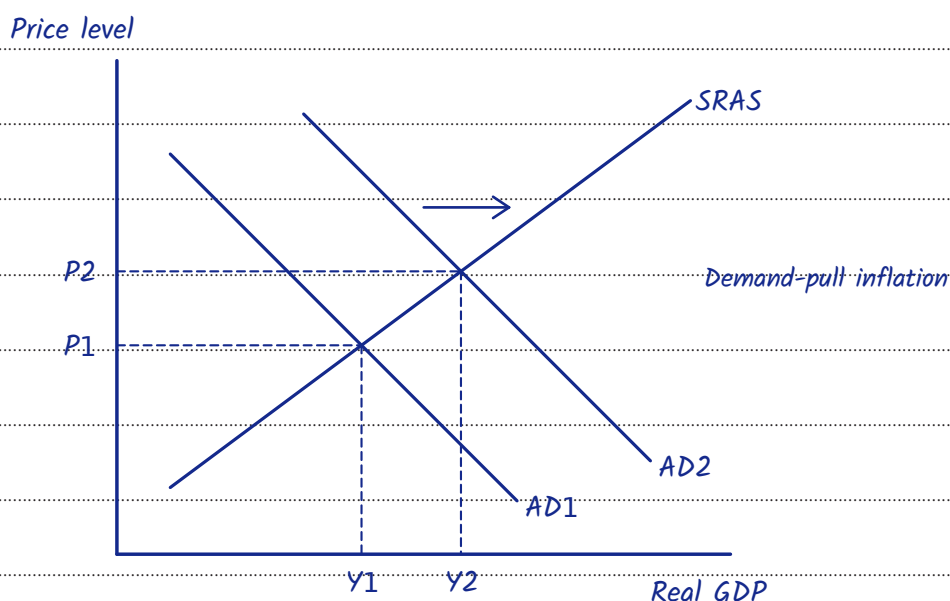
raise output while reducing inflationary pressure, so the objectives would be complementary.

Extract 1 shows a trade-off between prosperity (living standards) and sustainability.

Many of the world's most prosperous countries are the least sustainable, and humanity uses the equivalent of 1.7 Earths each year, so demand for resources exceeds what the Earth can regenerate (ecological overshoot). Economic growth uses more non-renewable resources and creates negative externalities such as carbon emissions, so higher real GDP today may reduce the welfare of future generations.

Norway shows this trade-off clearly. It appears to have an ecological surplus thanks to widespread use of renewables at home, but it masks its true carbon footprint by exporting fossil fuels to be burned elsewhere, which raises export earnings and its own prosperity. So there is a trade-off between domestic sustainability and prosperity from export earnings, and the environmental cost is simply shifted to other countries.

However, the trade-off between prosperity and sustainability depends upon the sources of prosperity. If prosperity is derived from the exploitation of fossil fuels, then the trade-off may be large. If the wealth created through fossil fuels is invested in the



development of sustainable energy sources, rather than spent on consumption, then the trade-off may be reduced, as Norway has done through its sovereign wealth fund and

renewables at home. Growth based on services, technology and green investment can raise living standards with lower resource use.

The extent of the trade-offs also depends upon which macroeconomic objectives are given the greatest weight or priority by governments. If the UK government prioritises growth rather than inflation, then above target inflation may not be seen to conflict with growth, at least in the short term. Trade-offs are also limited by trade bloc membership and international agreements, for example on climate change, which commit countries to cutting emissions whatever the effect on short run growth.

In conclusion, there is a significant trade-off between growth and sustainability when growth relies on fossil fuels, and between growth and inflation when inflation is demand-pull and the economy is near full capacity. However, the trade-off is not inevitable: with cost-push inflation both objectives can be missed together, and with supply-side and green investment both can be achieved. Overall, the extent of the trade-off depends on the cause of inflation, the source of growth, the time period and government priorities.

(Total for Question 3 = 20 marks)

TOTAL FOR SECTION C = 20 MARKS
TOTAL FOR PAPER = 100 MARKS



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