



Please check the examination details below before entering your candidate information

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Pearson Edexcel Level 3 GCE

Thursday 18 May 2023

Morning (Time: 2 hours)

Paper
reference

9EC0/01

Economics A

Advanced

PAPER 1: Markets and Business Behaviour

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 three sections in this question paper. Answer **all** questions from Section A and Section B. Answer **one** question from Section C.
- 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.

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SECTION A

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

You are advised to spend 30 minutes on this section.

Use the data to support your answers where relevant.
You may annotate and include diagrams in your answers.

- 1 In a major reform of its command economy, the Cuban government will allow small private businesses to operate in most fields. Free market economists have long called for the role of small business to be expanded to help jump-start the economy and to create jobs.

(Source adapted from: <https://www.telegraph.co.uk/news/2021/02/07/cuba-allows-massive-expansion-private-businesses/>)

- (a) With reference to the information provided, explain **one** advantage of a free market economy.

(4)

One advantage of a free-market economy is ^{greater} consumer choice. As the "Cuban government will allow small private businesses to operate" many entrepreneurs (a factor of production) will enter the market. These entrepreneurs will bring innovation to the market and sell different goods. This will ultimately enhance consumer choice which is an ^{advantage} ~~benefit~~ to consumers.



(b) Which **one** of the following economic thinkers supported the idea of a command economy?

(1)

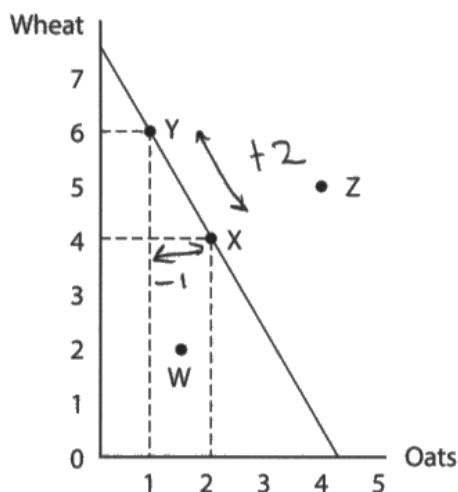
- ☒ **A** Adam Smith
- ☒ **B** Friedrich Hayek
- ☒ **C** John Maynard Keynes
- ☒ **D** Karl Marx

(Total for Question 1 = 5 marks)



P 7 2 9 8 0 A 0 3 3 6

2 The production possibility frontier shows last year's harvest for a UK farmer at point X.



(a) Calculate the opportunity cost of the decision by the farmer to harvest 6 units of wheat this year at point Y (movement from point X to point Y).

(2)

At point X the farmer produces 4 units of wheat and 2 units of oats. When moving to point Y, the units produced of wheat increases by 2 (to 6 units), but there is an opportunity cost of producing 1 less unit of oats.

(b) Explain the impact on efficiency of producing at point W in the following year.

(2)

When producing at point W, the farmer will be operating inefficiently. This is because all factors of production are not fully and efficiently employed. Therefore the farmer can not operate at full capacity.



(c) Which **one** of the following would be most likely to help the farmer reach point Z?

An increase in

(1)

- ☒ A investment in milk production machinery
- ☒ B investment in modern farming technology
- ☒ C the demand for wheat
- ☒ D the price of oats

(Total for Question 2 = 5 marks)



P 7 2 9 8 0 A 0 5 3 6

3 A luxury brownie baker is faced with falling demand as incomes fall.

(a) The likely income elasticity of demand for a luxury good is:

$$VED = \frac{\% \Delta Qd}{\% \Delta Y}$$

(1)

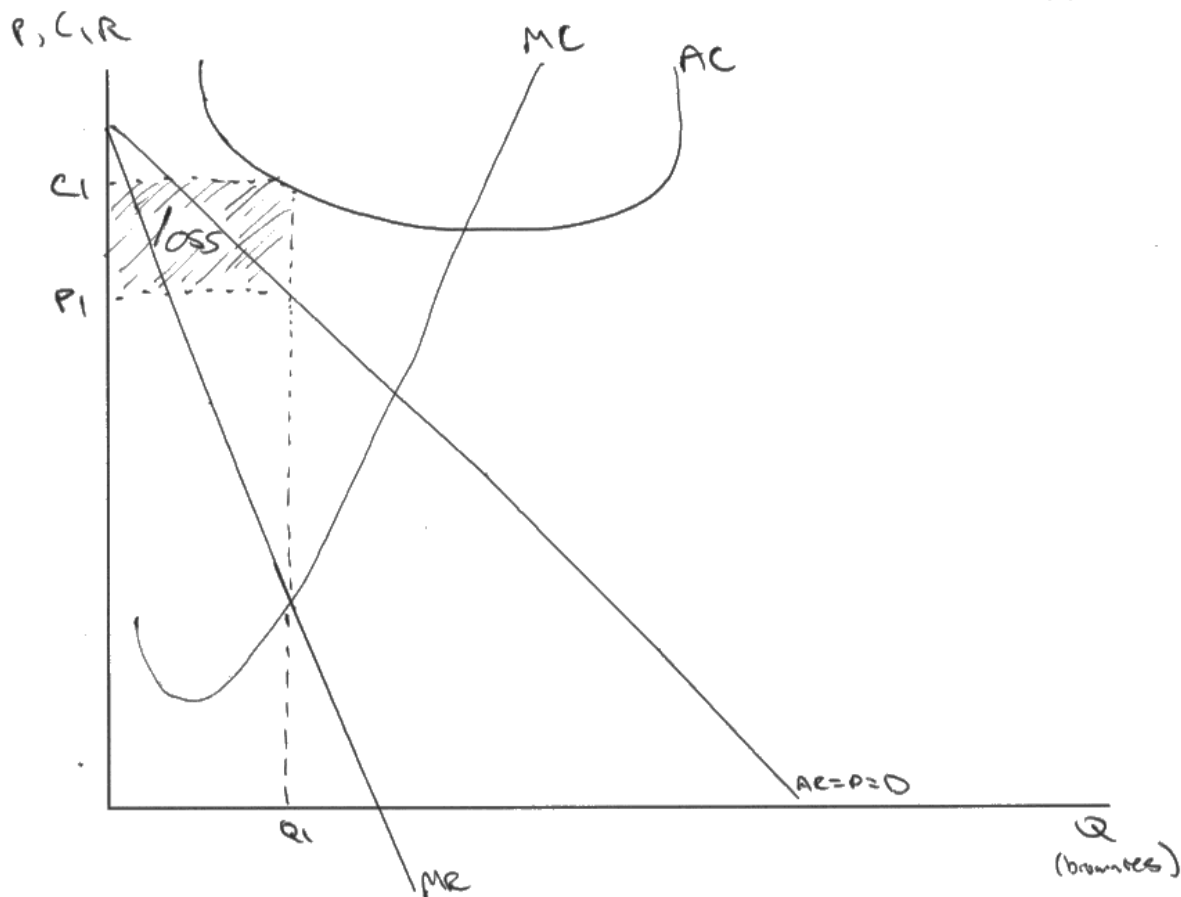
- ☒ A -3.40
- ☒ B -0.74 ✓
- ☒ C +0.74 ✓
- ☒ D +3.40



(b) Small local bakeries have many of the characteristics of monopolistic competition.

Draw the short run profit maximising equilibrium of a **loss-making** luxury brownie baker.

(4)



(Total for Question 3 = 5 marks)



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QUESTION 4 BEGINS ON THE NEXT PAGE.



7
Turn over ►

- 4 An annual season ticket for a train journey between London and Reading is planned to increase from £5 044 to £5 664 in 2023.

(Source adapted from: <https://commonslibrary.parliament.uk/how-much-could-rail-fares-increase-by-in-2023-and-why>)

- (a) With reference to the information provided, calculate the percentage change in the price of an annual season ticket.

(2)

$$\% \Delta \text{ in } P = ?$$

$$\begin{array}{r} 5664 \\ - 5044 \\ \hline = 620 \end{array}$$

$$620/5044 = 0.1229...$$

$$\times 100 = 12.29$$

$$= +12.3\%$$

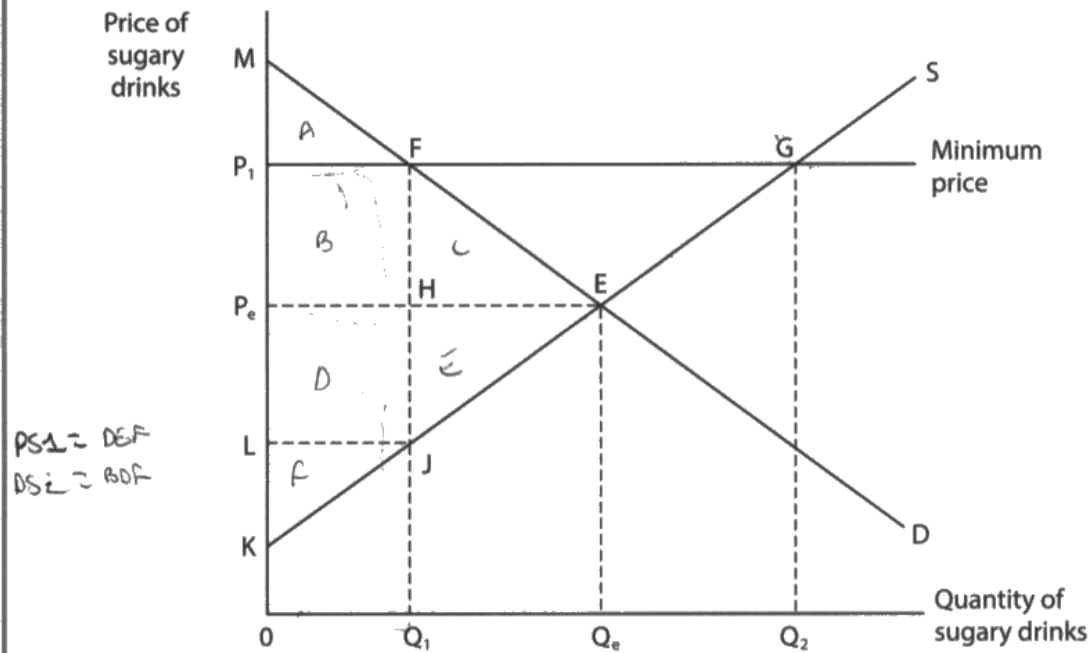
- (b) Explain the likely impact of the increase in price of a season ticket on consumer surplus.

(2)

The increase in price (£5044 to £5664) will lead to a decrease in consumer surplus. This is because less consumers will be willing or able to purchase the season ticket. There will be a contraction in demand which ultimately causes the decrease in consumer surplus.



The diagram below shows the demand and supply for sugary drinks.



(c) Which **one** of the following areas represents the change in producer surplus when a minimum price is imposed?

(1)

- ☒ A FEP_eP_1 \times
- ☒ B FMP_1
- ☒ C GEP_eP_1 \times
- ☒ D GKP_1 \times

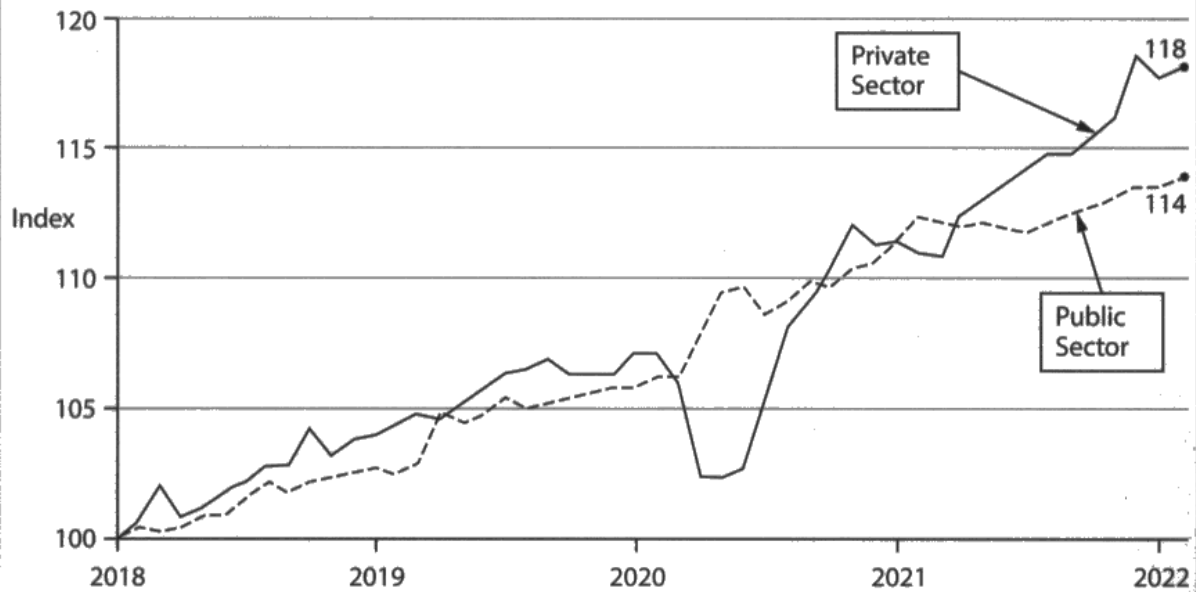
(Total for Question 4 = 5 marks)



P 7 2 9 8 0 A 0 9 3 6

5 Index of pay in the public and private sector.

Nominal average weekly earnings (base year January 2018 = 100)



(Source adapted from: <https://www.ft.com/content/48dafbb9-371d-4683-9afb-26652add888c>)

(a) Which **one** of the following is the ratio of public sector pay relative to private sector pay in 2022?

(1)

- ☒ A 1:0.97
- ☒ B 1:1.04
- ☒ C 1:4.0
- ☒ D 1:14.0



- (b) Over 90% of nurses work in the public sector. Nurses in the public sector have experienced wage rises lower than those in the private sector over the past 10 years.

(Source adapted from: <https://www.nuffieldtrust.org.uk/resource/chart-of-the-week-real-terms-nhs-staff-pay-from-2010-to-2020>)

Using the information provided and the concept of monopsony, explain why nurses in the public sector have had lower wage rises than those in the private sector.

(4)

Monopsony power enables the state to have bargaining power and control over nurses' wages. In the UK the public health sector ~~has~~ ^{the state} has a monopsony power in the form of the NHS. As the NHS is the only public health provider, the NHS has greater bargaining power over the 90% of nurses in the public sector. If workers are not satisfied with the wages, they cannot relocate to another employer. Hence, the NHS can exploit workers by paying lower wages (below $MC_L = P_L$). This explains why public sector nurses experienced "wage rises lower than those in the private sector over the past 10 years".

(Total for Question 5 = 5 marks)

TOTAL FOR SECTION A = 25 MARKS



P 7 2 9 8 0 A 0 1 1 3 6

SECTION B

Read Figures 1 and 2 and the following extracts (A to C) before answering Question 6.

Write your answers in the spaces provided.

You are advised to spend 1 hour on this section.

Question 6

The UK online streaming services market

Figure 1: Market share of UK online streaming services

	Q2 2021	Q3 2021	Q4 2021	Q1 2022	Q2 2022
Amazon Prime Video	37.9%	41.1%	45.0%	27.1%	25.9%
Disney+	16.0%	17.7%	19.3%	14.1%	21.5%
Netflix	15.0%	10.5%	5.0%	9.4%	4.5%
NOW	11.3%	11.2%	5.6%	11.0%	11.1%
AppleTV+	4.0%	5.5%	7.3%	9.2%	9.9%
BritBox	4.0%	3.0%	5.7%	6.0%	5.9%
Others	11.8	11.0%	12.1%	23.2%	21.2%

(Source adapted from: Kantar, Worldpanel Division Geotech 2022)

Figure 2: UK online streaming services – monthly fees

Streaming service provider	September 2022
Netflix premium (4 users/ultra HD*)	£15.99
Netflix standard (2 users/HD)	£10.99
Netflix basic (single user/non HD**)	£6.99
Amazon Prime Video	£8.99
Amazon Prime Video – Student price	£4.49
Disney+	£7.99
AppleTV+	£4.99

*This is the highest quality picture currently available

** This is the basic quality picture

(Source adapted from: <https://www.radiotimes.com/tv/what-to-watch-tv/best-streaming-service-uk/>)



Extract A

How Netflix makes use of behavioural science

In the last few years, companies have been trying to find ways to attract the attention of customers. Various streaming platforms such as Netflix, Amazon, and YouTube use 'nudges' to influence consumer behaviour. The 'next-up' feature on Netflix or 'auto-play' on YouTube has been subject to research that relates it to binge-watching. Binge-watching is the practice of viewing for a prolonged period, multiple episodes of a TV show or several films in rapid succession. 5

Similarly, the policy of offering a one-month free subscription under the label of 'free trial' requires credit card information to turn the forgetful subscriber into a potential paying one. Following this strategy, Netflix has expanded to 190 countries in just seven years and according to the Wall Street Journal, the company generated total revenue of over \$5.2 billion in 2019, which was an increase from 2018 of around \$4 billion. 10

However, 2022 data shows that consumers, increasingly worried about the rising cost of living, are turning their back on Netflix. With a reported cancellation of over 200 000 subscriptions in the first quarter and another two million forecast to leave by the end of the year. Subscribers are rethinking their commitment to the streaming services that grew their numbers sharply during the home-based months of the global health crisis. Netflix subscribers have also quoted a decline in value for money and satisfaction with the quality of the shows as key motives for cancellation. 15

Disney now see higher satisfaction rankings than Netflix across the quality of shows, amount of original content, number of new-release films, variety of classic films and amount of kids' content. Forecast cancellation rates for Disney+ fell to an all-time low of 3.2%. 20

(Source adapted from: <https://www.novanudge.com/post/sludge-on-demand-how-netflix-makes-use-of-behavioural-science>
<https://www.theguardian.com/media/2022/apr/20/netflix-shares-fall-losing-subscribers>)

Extract B

The economics of price discrimination

Throughout 2022, Netflix, a 100-billion-dollar company, increased prices in the US, Canada, the UK and Ireland (most of which saw similar price increases in 2021, too). In sharp contrast, Netflix recently announced it was reducing its prices in India (standard/2-user 499 rupees a month, equivalent to £5.42) in a bid to compete with Disney+ and Prime. 5

UK students currently enrolled in a college or university who have a valid student email address can join Prime Student through the Amazon website. This gives them nearly 50% off a standard Prime membership and many other exclusive benefits.

(Source adapted from: <https://help.netflix.com/en/node/24926/in>)



P 7 2 9 8 0 A 0 1 3 3 6

Extract C

Educational Website and TV Programmes

BBC Bitesize is a learning platform created by the BBC in 1998. The online study resource allows parents to teach their children from home, using ready-made lesson plans and study guides with questions for all ages. The revision sessions are free to watch and they are available for children aged five up to their late teens. The guides are written by teachers and subject experts, so they are reliable and follow the National Curriculum. Last year Bitesize attracted around two million weekly unique browsers with a peak week of 3.3 million in the GCSE exam period.

5

Oak National Academy is a freely available learning resource website created for pupils aged four to sixteen. Launched in 2020, as a response to the global health crisis, the website includes lesson slides, video lessons, worksheets, and quizzes conforming to the national curriculum in England. Ministers have set aside £43 million to fund the Oak National Academy over the next three years.

10

(Source adapted from: <https://www.bbc.co.uk/bitesize/articles/zmjdmbk>
<https://www.structural-learning.com/post/oak-academy-a-teachers-guide#:~:text=Oak%20National%20Academy%20is%20a,the%20national%20curriculum%20of%20England>)

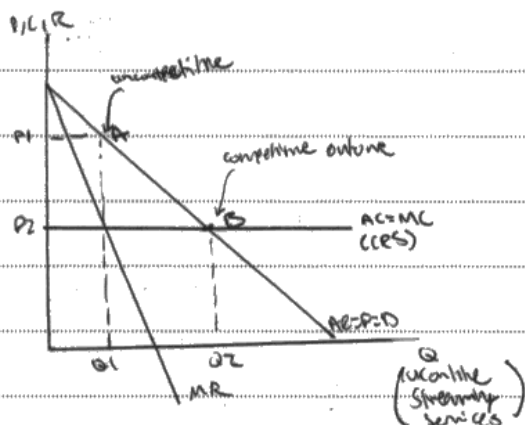


- 6 (a) With reference to Figure 1, explain the market structure that best describes the market for UK online streaming services. (5)
- (b) With reference to the information provided, assess whether Netflix subscribers behave rationally. (10)
- (c) With reference to the information provided, examine the likely numerical value of the cross elasticity of demand between UK online streaming services. (8)
- (d) With reference to Extract C, discuss the likely private and external benefits of viewing educational websites and TV programmes. (12)
- (e) Using examples from Figure 2 or Extract B, discuss the likely impact of price discrimination on a firm's profits. Use a relevant diagram to support your answer. (15)



- 6 (a) With reference to Figure 1, explain the market structure that best describes the market for UK online streaming services.

(5)



The market structure which best describes the UK online streaming services is an oligopolistic market. This is mainly because of how highly concentrated the market is. The ~~4~~ top 4-firm concentration of the market in Q2 2022 was 68.4%. This suggests that the market is uncompetitive and dominated by a few large firms which offer different services. This can be seen on the diagram above in which the UK streaming services market operates more closely to point A.



(b) With reference to the information provided, assess whether Netflix subscribers behave rationally.

(10)

Netflix subscribers can be suggested as rational decision makers. This is because subscribers understand their measure of utility well. Due to a decline in "value for money and satisfaction" as Extract A suggests, Netflix experienced cancellations of over "200,000". This conveys that Netflix subscribers do behave rationally since they ~~are~~ aimed to maximise utility by cancelling their subscription.

However, this argument can be challenged as the subscribers who cancelled their subscription may not have considered maximising their utility, but rather other factors came in to play. For instance, the cost of living crisis in the UK may have pushed subscribers to end their subscription, rather than aiming to maximise utility.

Netflix subscribers can also be deemed as irrational due to ^{information gaps and} computational weakness - the inability or unwillingness to make complex decisions. In this instance, the irrational behaviour could be purchasing Netflix which is more expensive



than some other streaming services, such as Apple TV. Apple TV is \$2 less than the basic Netflix subscription, but ~~for~~ Netflix subscribers may not know of this information gap. As a result, the irrational decision is made which is buying Netflix which is more expensive.

However, there are different services provided by each company. This explains why consumers may opt for the more expensive Netflix subscription in order to gain greater utility from unique services.





Handwriting practice area with horizontal lines and a large blank space for drawing or writing.



(c) With reference to the information provided, examine the likely numerical value of the cross elasticity of demand between UK online streaming services.

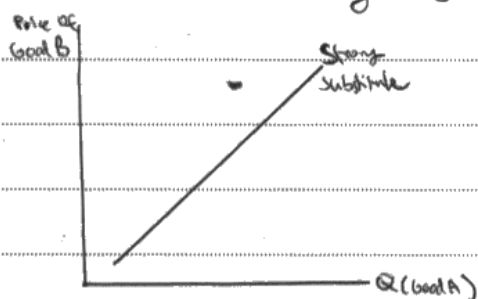
(8)

Cross price elasticity of demand (XED) is the responsiveness of quantity demanded of Good A, given a change in price of Good B.

$$XED = \frac{\% \Delta \text{ in Qd of Good A}}{\% \Delta \text{ in P of Good B}}$$

The likely numerical value of XED between UK online streaming services is: $XED < 1$.

(shown in the diagram).



XED will be greater than 1 as online streaming services are substitute goods. Therefore, if prices for Netflix goes up to £6.99 (in September 2022), the quantity demanded for Apple TV+ ~~will~~ will go up which is priced below Netflix at £4.99.

Consumers are elastic (highly responsive) to a change in price of one online streaming service.

However, the XED might actually be inelastic and what: ~~0 < XED < 1~~ $0 < XED < 1$.

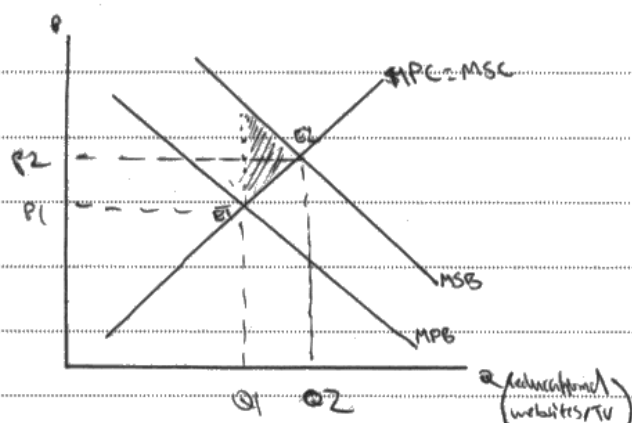


This is because some streaming services offer exclusive services. This makes other streaming services weak substitutes as they don't offer completely the same services. Hence, XED may be inelastic.



(d) With reference to Extract C, discuss the likely private and external benefits of viewing educational websites and TV programmes.

(12)



There is a positive external benefit at the stage of consumption when viewing educational websites and TV programmes. BBC website offers "free revision sessions" which attracts "2 million weekly browsers". This provision of education, when consumed, allows students to gain skills and understanding. Subsequently, their qualifications (e.g. SATs, GCSEs, A-levels) will be easier to obtain and at a higher standard. In the long-run this will have a spill-over effect onto 3rd parties, such as employers and firms. Firms will benefit from higher qualified and skilled workers which will increase their productivity and ultimately their profits. The diagram above displays this as marginal social benefit is greater than

Marginal private benefit ($MPB < MSB$).

However, this positive spill-over effect depends on whether the consumers of educational websites and TV programmes truly benefit from it and to what extent. The same of the "2 million weekly users" may only use the website / TV programme for a very short amount of time, which is not taken into consideration. Therefore, the consumers of the educational programmes may not gain skills or high qualifications which therefore prevents the spill-over effect onto firms / employers.

^{The} likely private benefits of viewing education vary in the short and long-run. In the short-run, consumers gain from learning resources from websites such as "Oak National Academy" which allows them to develop skills, and this will translate into better qualifications and subsequently better employment. Ultimately, through gaining skills and qualifications, consumers will earn higher incomes in the future which is a private benefit. (P.T.O. for evaluation)

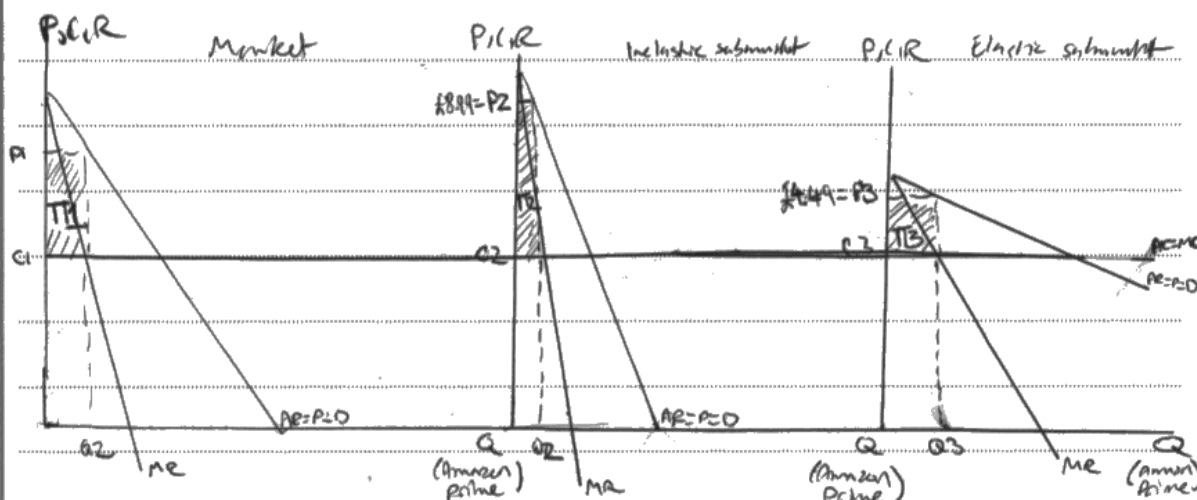


However, there may not be significant
- private benefits ~~for~~ consuming additional
TV shows / websites. This is because
consumers may already have information /
resources that are identical to that of
the providers. ^(e.g. from school) Therefore, there would not
be any benefit gained from consuming
these additional TV shows / websites.



(e) Using examples from Figure 2 or Extract B, discuss the likely impact of price discrimination on a firm's profits. Use a relevant diagram to support your answer.

(15)



Price discrimination will increase a firm's profit. By charging different prices to elastic and inelastic markets, firms will generate more revenue and sales. For example, ~~Amazon~~ ^{Amazon} decreased prices ^{to \$4.49} for Prime to students who are elastic consumers. They are elastic as they earn very little/no income and so Amazon Prime is a larger weight to their spending. This pricing strategy will allow Amazon to gain greater market share and sales to this submarket. Also, Amazon change \$8.99 to the inelastic submarket who are more willing and able to purchase the service at a higher price due to the income effect. When put together Amazon generates π_2 and π_3 (as shown in



the diagram above). $\pi_2 + \pi_3$ is greater than π_1 which is the market price. Therefore, price discrimination can achieve greater profits by targeting specific submarkets to generate more revenue and profit.

However, gaining profits from price discrimination relies heavily on the concentration/concavity in the market. The UK online streaming service is an oligopolistic market and there are other producers who can supply similar services at a lower price. For instance, AppleTV+ charge only £4.99 across the market. This will eat into Amazon's profits as Amazon's prices for the elastic market is much higher than that of Apple's. As a result ^{elastic} consumers will switch from Prime to Apple which will reduce Amazon's profits significantly.



Price discrimination may cause a decrease in a firm's profits, specifically in the UK online streaming services market. This is due to the ~~price~~ elasticity of demand of consumers. Increasing prices for ^{the} inelastic submarket will cause a decrease in revenue as more consumers are less willing and able to purchase the service.

In other words, consumer surplus decreases. Extract A clearly illustrates this as Netflix experienced "200,000 cancellations".

Therefore, price discrimination will not always lead to an increase in profits, but rather a decrease.

However, firms can still increase their profits through price discrimination due to long contracts. For instance, Netflix can offer annual, 12 month contracts which consumers are locked in to. Therefore, if consumers opt to cancel their subscription, they will not be able to and Netflix maintains their increased profitability.



P 7 2 9 8 0 A 0 2 7 3 6

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(Total for Question 6 = 50 marks)

TOTAL FOR SECTION B = 50 MARKS



SECTION C

Answer ONE question from this section.

Write your answer in the space provided.

You are advised to spend 30 minutes on this section.

EITHER

- 7 The average UK household energy bill (gas and electric combined) rose 80% from £1 971 in 2021 to £3 549 in 2022.

(Source adapted from: <https://www.telegraph.co.uk/money/consumer-affairs/energy-price-cap-rise-october-2022-what-happen-household-bills/>)

Evaluate possible methods of government intervention to control household energy bills in the UK.

(Total for Question 7 = 25 marks)

OR

- 8 Using 2021 estimates of carbon emissions, it is estimated that a petrol car journey from London to Glasgow emits approximately 3.3 times more carbon dioxide per passenger than the equivalent journey by train.

(Source adapted from: <https://www.gov.uk/government/statistics/transport-and-environment-statistics-autumn-2021/transport-and-environment-statistics-autumn-2021>)

Evaluate possible methods of government intervention to reduce carbon emissions caused by road transport in the UK.

(Total for Question 8 = 25 marks)

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 7 ☒ Question 8 ☒

Write your answer here:

.....

.....

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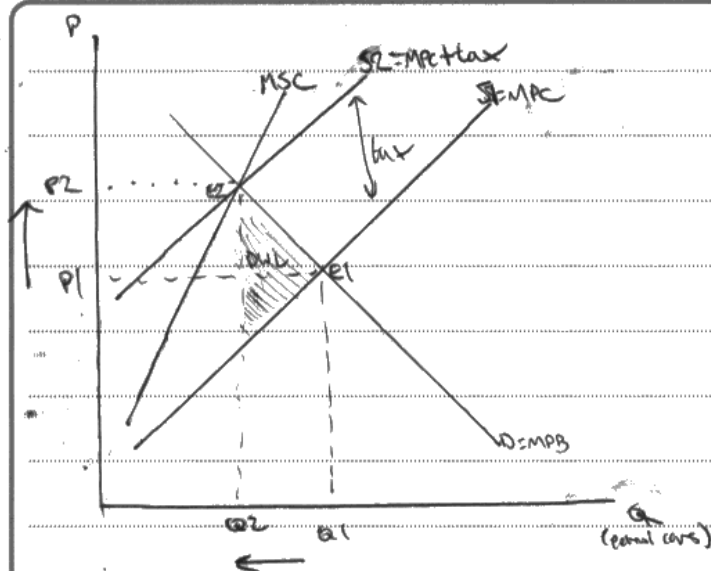
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P 7 2 9 8 0 A 0 2 9 3 6



The government can impose an indirect tax on petrol/diesel cars to internalise the negative consumption externality of these cars which cause carbon emissions. Road transport contributes highly to carbon emissions. Each ~~running~~ car costs the NHS £8000 a year ^{due} to the emissions which impact the health of others and puts a strain on the NHS. By imposing an indirect tax, such as a carbon tax, against the production of cars, the supply of petrol/diesel cars will shift inwards ($S1 \rightarrow S2$). This is because the costs of production to firms increases as manufacturing cars ^{in factories} emits lots of emissions. As costs increase for producers, prices will increase from $P1 \rightarrow P2$ due to the profit incentive. Subsequently, there will be a contraction in ~~demand~~ demand and so

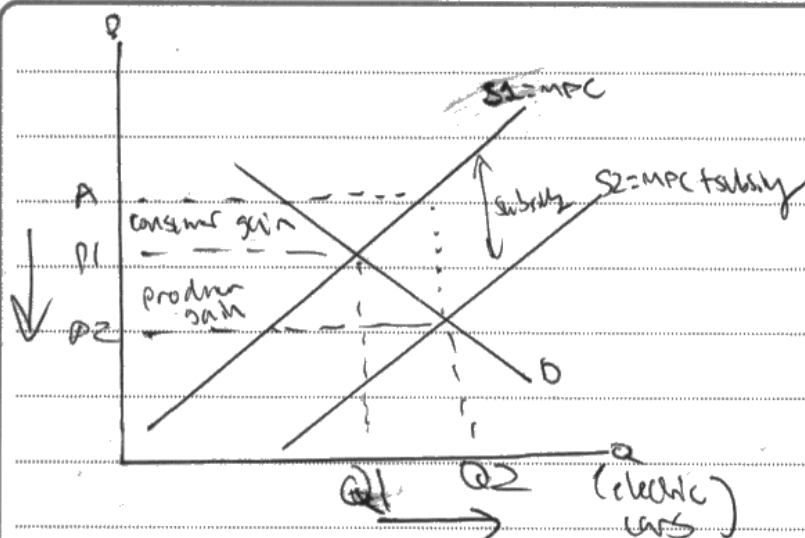


the quantity of cars produced decreases from $Q_1 \rightarrow Q_2$. This further internalises the negative externality of producing cars and the dead weight-loss area (shaded in an diagram) is removed. This shows a form of government intervention which can effectively reduce carbon emissions in the UK caused by road transport.

However, this depends on whether the government has the correct information when imposing the tax. It is difficult to measure the optimal size of a tax as the government ~~has~~ suffers from information gaps. Therefore, the government may impose a tax which is too low and does not effectively reduce the production of cars and so does not reduce carbon emissions. Furthermore, the imposition of the tax may cause producers to offshore their production. This will reduce emissions in the UK but not globally which is not all completely successful.



P 7 2 9 8 0 A 0 3 1 3 6



Another method of intervention would be granting a subsidy to the production of electric cars. Electric cars rival petrol/diesel cars and are ~~less~~ produce less carbon emissions. By granting a subsidy to electric car manufacturing, such as Tesla and Volkswagen, the costs of production decrease. As a result, supply shifts ^(S1 → S2) outward. As more electric vehicles enter the market at a cheaper price (P_2), the quantity demanded increases ($Q_1 \rightarrow Q_2$). As consumers ~~start~~ substitute from petrol/diesel cars to electric, their carbon footprint decreases. This will ~~also~~ reduce carbon emissions, and ~~also~~



However, this depends on whether producers charge lower prices. The electric car market is highly concentrated through the likes of Tesla and Volkswagen. They can exploit economies which will not increase Qd or reduce expenditure.







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TOTAL FOR SECTION C = 25 MARKS
TOTAL FOR PAPER = 100 MARKS



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