Write your name here

Surname: StemUp Model Solution | Other names:

Pearson Edexcel Level 3 GCE

Centre Number | Candidate Number

Economics A

Advanced Subsidiary

Paper 1: Introduction to Markets and Market Failure

Monday 15 May 2017 – Morning
Time: 1 hour 30 minutes

Paper Reference
8EC0/01

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.
- Answer **all** questions in Section A.
- In Section B, answer **all** of questions 6(a) to 6(e) and **one** question from 6(f) or 6(g).
- Answer the questions in the spaces provided
  – *there may be more space than you need.*

Information

- The total mark for this paper is 80.
- 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 ▶

P49600A

©2017 Pearson Education Ltd.

1/1/1/1/e2

P 4 9 6 0 0 A 0 1 2 4

Pearson

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 25 minutes on this section.

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

1 The production possibility frontier for an economy is shown in the table below.

Capital goods output (million units)	Consumer goods output (million units)	Opportunity cost
0	42	–
10	40	2
20	36	4
30	30	6
40	22	8
50	12	10
60	0	12

(a) Explain, using marginal analysis from the table above, the concept of opportunity cost. (You may use the last column in answering the question.)

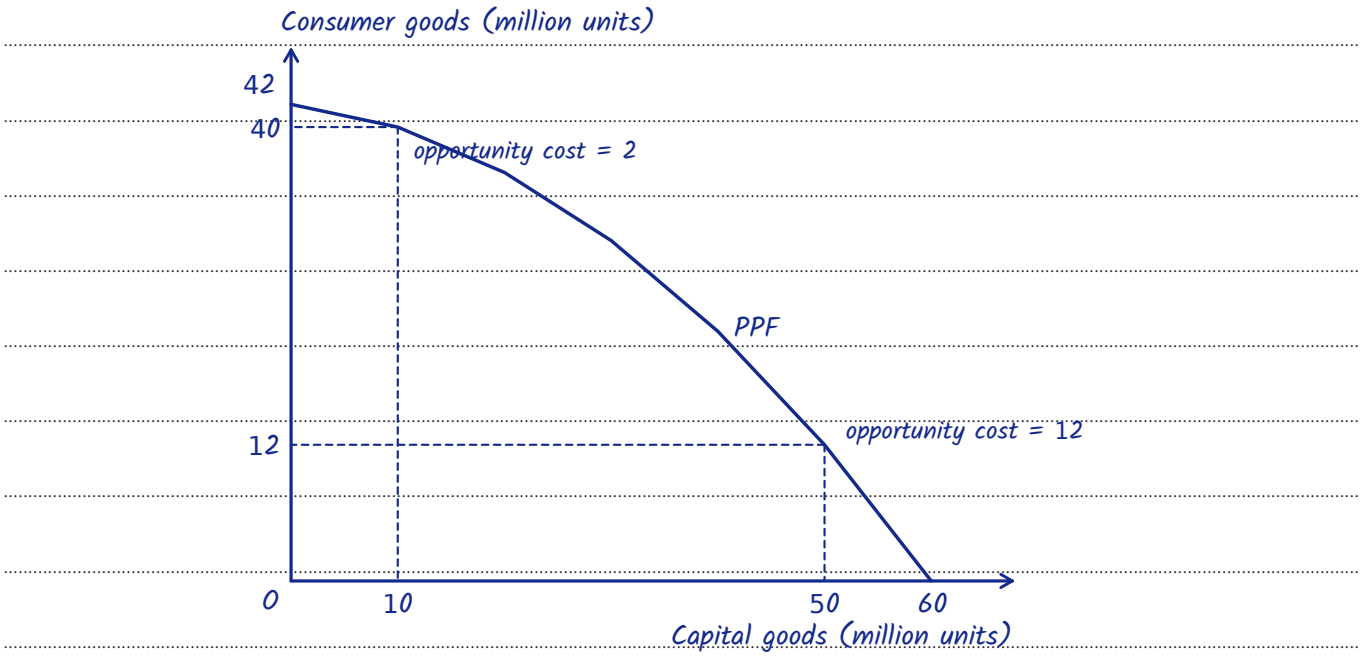
(3)

Opportunity cost is the value of the next best alternative foregone when a choice is made. A production possibility frontier (PPF) shows the maximum potential output combinations of two goods an economy can achieve when all its resources are fully and efficiently employed.

Using marginal analysis, raising capital goods output from 0 to 10 million units means giving up only 2 million units of consumer goods (42 to 40), so the opportunity cost is small compared to the gain. But raising it from 50 to 60 million units costs 12 million units of consumer goods (12 to 0). The opportunity cost of each extra 10 million capital goods rises: 2, 4, 6, 8, 10, 12.

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

stemup.co.uk



This is increasing opportunity cost: resources are not equally suited to both goods, so the PPF is concave to the origin.

(b) Which **one** of the following is the most likely effect of an economy producing more capital goods?

(1)

- ☐ **A** Reduced specialisation of labour
- ☒ **B** A shift in the production possibility frontier
- ☐ **C** A reduction in marginal utility
- ☐ **D** A shift in demand for consumer goods

(Total for Question 1 = 4 marks)

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

2 The table below shows UK wheat production between 2010 and 2015.

Year	Wheat production ('000 tonnes)	Index numbers of wheat production (2010 is base year)
2010	14 878	100
2011	15 257	102.5
2012	13 261	89.1
2013	11 921	80.1
2014	16 606	111.6
2015	16 129	108.4

(Source: adapted from https://www.gov.uk/government/uploads/system/uploadsattachment_data/file/466383/farming-statistics-2015-wheat-and-barley-production-uk.pdf)

(a) Define the term 'base year'.

(1)

The base year is the benchmark year with which all other values in a series are compared; it is given an index number of 100.

(b) Calculate the index numbers for 2011 and 2012, using 2010 as the base year.

(2)

2011 index = (15 257 ÷ 14 878) × 100 = 102.5

2012 index = (13 261 ÷ 14 878) × 100 = 89.1

So the index is 102.5 in 2011 and 89.1 in 2012.

(c) The percentage change in wheat production from 2014 to 2015 was:

(1)

- ☒ **A** 0.03
- ☒ **B** –2.87
- ☒ **C** –2.95
- ☒ **D** –477

(16 129 – 16 606) ÷ 16 606 × 100
= –2.87%

(Total for Question 2 = 4 marks)

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

stemup.co.uk

3 In 2015 the UK government cut subsidies for the installation of solar energy panels.

(a) Define the term 'subsidies'.

(1)

A subsidy is a grant of money given by the government to producers to lower their costs and encourage production or consumption.

(b) The most likely effect of cutting subsidies for the installation of solar panels is to:

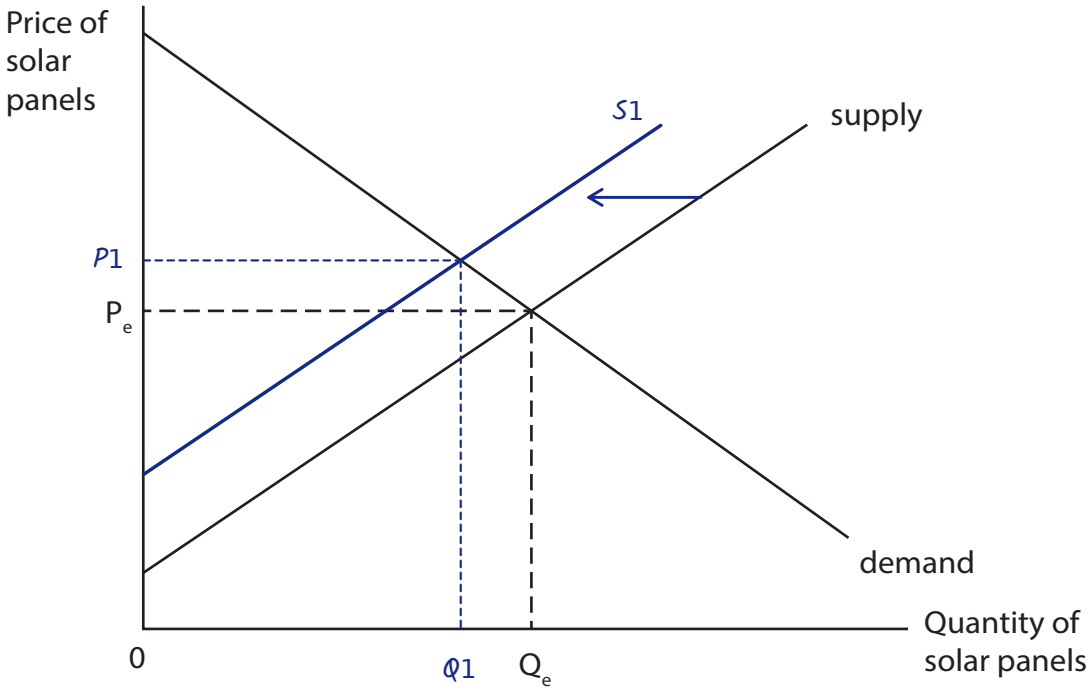
(1)

- ☐ **A** increase producer surplus
- ☐ **B** decrease the provision of public goods
- ☒ **C** decrease consumer surplus
- ☐ **D** increase government expenditure

(c) Annotate the diagram below to show the effect of removing the solar panel installation subsidy on the equilibrium price and quantity.

(2)

Solar panel installation market diagram



S1 = supply after the subsidy is removed: price rises Pe to P1, quantity falls Qe to Q1

(Total for Question 3 = 4 marks)

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

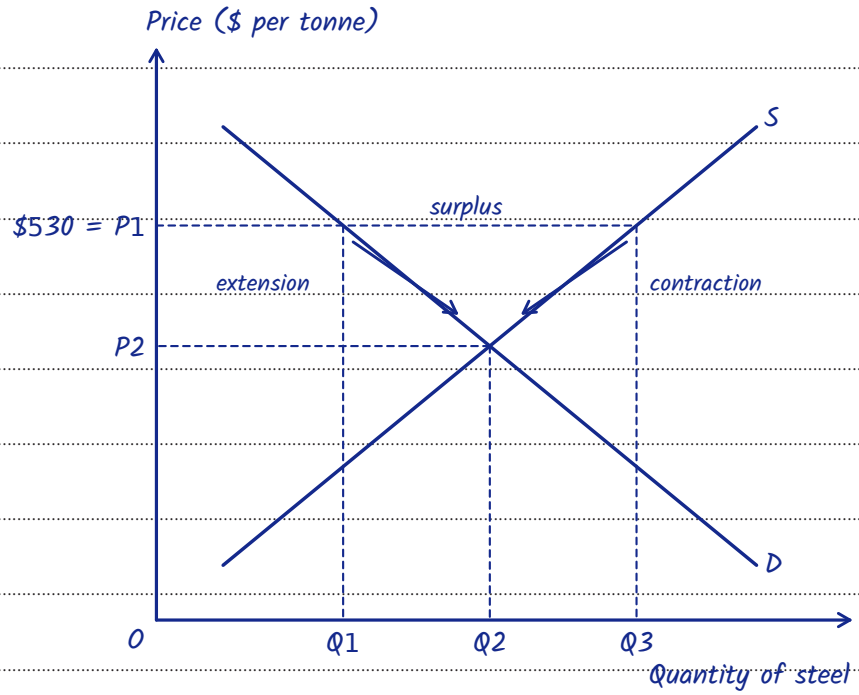
4 The excess supply of carbon steel has recently caused its global price to fall below $530 per tonne.

(Source: adapted from http://www.meps.co.uk/allproducts%20steel%20price.htm)

(a) Explain how the price mechanism responds to excess supply in a free market.

(3)

Excess supply (a surplus) is when, at the current price, quantity supplied is greater than quantity demanded. At a price of $530 per tonne (P1), the quantity of carbon steel supplied (Q3) exceeds the quantity demanded (Q1).



In a free market the price mechanism responds. The unsold surplus is a signal to steel producers that the price is too high, so they cut the price below $530 to sell their stock. The lower price is a disincentive to produce, so there is a contraction in supply, a movement back along the supply curve, while the lower price is an incentive to buyers, so there is an extension in demand, a movement down along the demand curve.

Price keeps falling until the surplus is gradually removed and a new market equilibrium is reached at P2 and Q2, where quantity demanded equals quantity supplied, so the price mechanism rations steel efficiently.

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

stemup.co.uk

Steel production leads to high levels of carbon emissions.

(b) Which **one** of the following is likely to result in an increase in carbon emissions?

(1)

- ☐ **A** Introducing a tradable pollution permits scheme
- ☐ **B** Shutting down steel factories
- ☐ **C** Subsidising the steel industry to install cleaner technology
- ☒ **D** Reducing indirect taxes on steel products

(Total for Question 4 = 4 marks)

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

5 Universities UK raised concerns about the proposal to reduce the maximum tuition fees (fee cap) for undergraduate courses in England from £9 000 to £6 000. It stated "This unfunded proposal to reduce the fee cap would damage the quality of experience our universities could deliver to students and remove opportunities for those seeking to benefit from a university education".

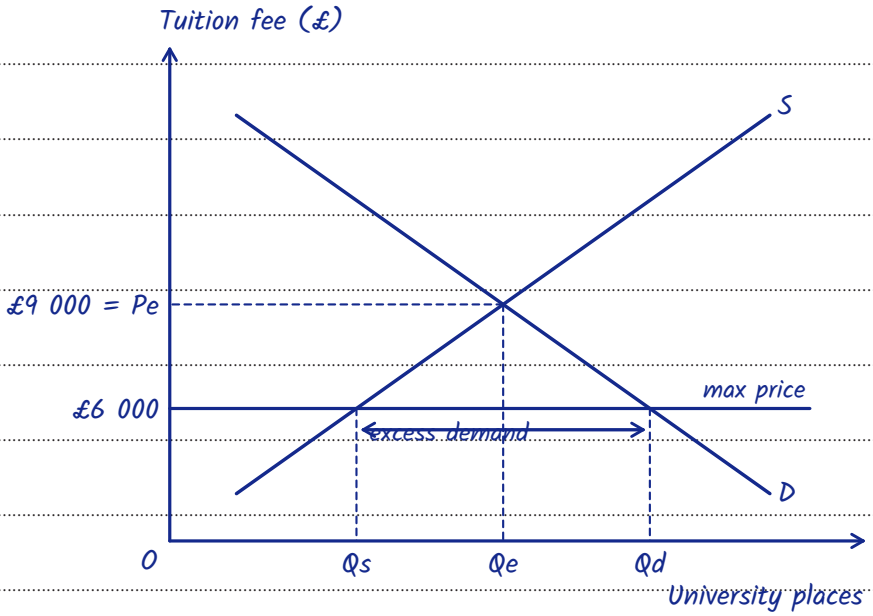
(Source: adapted from tuition fees 2015 Times letter Universities UK http://www.universitiesuk.ac.uk/highereducation/Pages/UUKboardFeesLetter.aspx#.VjoQRbfhDIU)

(a) Explain why reducing the tuition fee cap may result in excess demand for university places.

(3)

Excess demand (a shortage) is when quantity demanded is greater than quantity supplied at the current price.

The fee cap is a maximum price. If the market equilibrium fee is £9 000 (Pe), cutting the cap to £6 000 sets a maximum price below equilibrium. University becomes more affordable for applicants, so there is an extension in demand for places, a movement along the demand curve from Qe to Qd.



At the same time universities receive less revenue per student. As the proposal is unfunded they lack cash and may close departments, so there is a contraction in the supply of places, a movement back along the supply curve from Qe to Qs. Quantity demanded (Qd) exceeds quantity supplied (Qs), giving excess demand of Qd – Qs.

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

(b) Which **one** of the following statements is correct?

(1)

- ☒ **A** The marginal social benefits exceed the marginal private benefits from university education
- ☐ **B** University education is an inferior good
- ☐ **C** University education is a public good
- ☐ **D** The social optimum equilibrium quantity is less than the market equilibrium quantity for university education

(Total for Question 5 = 4 marks)

TOTAL FOR SECTION A = 20 MARKS

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

SECTION B

Read Figure 1 and the following extracts (A and B) before answering Question 6.

Answer ALL Question 6 (a) to 6 (e), and EITHER Question 6 (f) OR Question 6 (g).

You are advised to spend 1 hour and 5 minutes on this section.

Question 6

The market for cigarettes

Figure 1: Price elasticity of demand - a comparison between tobacco and e-cigarettes

Price of packet of 20 tobacco cigarettes £7.70–£9.50	Price of e-cigarette kit £9.99–£19.99
Average price per tobacco cigarette 48p	Single cigarette equivalent price of an e-cigarette 7p
Price elasticity of demand for tobacco cigarettes –0.35	Price elasticity of demand for e-cigarettes –1.9

(Source: adapted from https://www.blucigs.co.uk/united-kingdom/kits/all-kits)

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

stemup.co.uk

Extract A

Government intervention on tobacco

There was a time when smoking was fashionable. Television and magazine advertisements glorified smoking. Everyone from your dad to your doctor smoked in all places – cars, restaurants and even hospitals.

Tobacco is still the single biggest cause of cancer in the world and the leading cause of preventable deaths. Nearly 80% of the 1 billion smokers worldwide live in low- and middle-income countries.

Bans on tobacco advertising, promotion and sponsorship can reduce tobacco consumption. Comprehensive smoking bans covering indoor workplaces, public places and public transport have been introduced in 48 countries.

Tobacco taxes are the most cost-effective way to reduce tobacco use, especially among the young and people in low-income groups. A tax increase that raises tobacco prices by 10% decreases tobacco consumption by 4% in high-income countries and 5% in low- and middle-income countries.

However, some 8 million people are expected to die each year by 2030 – because they have smoked tobacco or have been exposed to passive smoking. The use of alternative products such as electronic cigarettes (e-cigarettes) are gaining in popularity but information about their effects is uncertain. Little research has yet been done about the long-term health effects of e-cigarettes and the nicotine dispensed by e-cigarettes is highly addictive. The illegal tobacco market still counts for 1 in every 10 cigarettes consumed globally. In addition, tobacco companies still spend tens of billions of dollars each year on advertising and promoting tobacco products and sponsoring events. They continuously challenge the regulatory measures governments are taking.

(Source: adapted from http://www.who.int/topics/tobacco/en/ and http://www.who.int/mediacentre/commentaries/reducing-tobacco-use/en/)

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

Extract B

Free market approach

Are free markets incompatible with good health? If the solution to every problem involves banning advertising, raising prices and restricting availability, you might easily conclude that the free market is the disease and government regulation is the cure. From this perspective, the providers of food, alcohol and tobacco are determined to push the most unhealthy products on the public at the lowest prices.

Contrary to this viewpoint, the profit motive is not unhealthy. Businesses have an obvious incentive to keep their customers alive and customers have a strong incentive to seek out healthier options. Any company that can make a scientifically sound health claim gains a competitive advantage over its rivals. Health sells. In contrast, government regulation can lead to negative health outcomes. Markets can correct themselves long before government failures are even acknowledged. Over a million Britons, almost all of whom are smokers or ex-smokers, use e-cigarettes, as a less hazardous product than cigarettes and yet e-cigarettes face increased regulations and in many countries they are banned.

It is neither consistent nor ethical to prevent smokers from switching to much safer alternatives. Efforts to regulate e-cigarettes are a far greater threat to public health than the products themselves.

We argue that the interests of consumers are nearly always better advanced by the provision of accurate information and free choice than by prohibitions and regulations. The government policy of small but steady tax rises on tobacco and ever-larger warning labels is becoming less effective and leads to unintended consequences.

(Source: adapted from http://www.iea.org.uk/blog/free-market-solutions-in-health-should-be-allowed-to-flourish, Christopher Snowdon, 11th July 2013)

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

stemup.co.uk

6 (a) Explain why 'bans on tobacco advertising' (Extract A, line 7) may result in a decrease in the revenue of tobacco firms. Include a supply and demand diagram in your answer.

(5)

(b) With reference to the information provided and your own knowledge, assess the view that tobacco consumers switching to e-cigarettes is an example of rational behaviour.

(10)

Tobacco cigarettes and e-cigarettes are considered to be substitutes.

(c) Explain how changes in the price of tobacco cigarettes may affect the demand for e-cigarettes over time.

(6)

(d) With reference to Extract A, lines 11–13, calculate the price elasticity of demand for tobacco cigarettes in high-income countries and in low-middle-income countries. You are advised to show your working.

(4)

(e) With reference to Figure 1, assess the likely reasons for the difference in price elasticity of demand for tobacco cigarettes and e-cigarettes.

(15)

EITHER

(f) Evaluate the possible advantages of a free market approach to cigarette consumption.

(20)

OR

(g) Evaluate the impact of government intervention in the cigarette market.

(20)

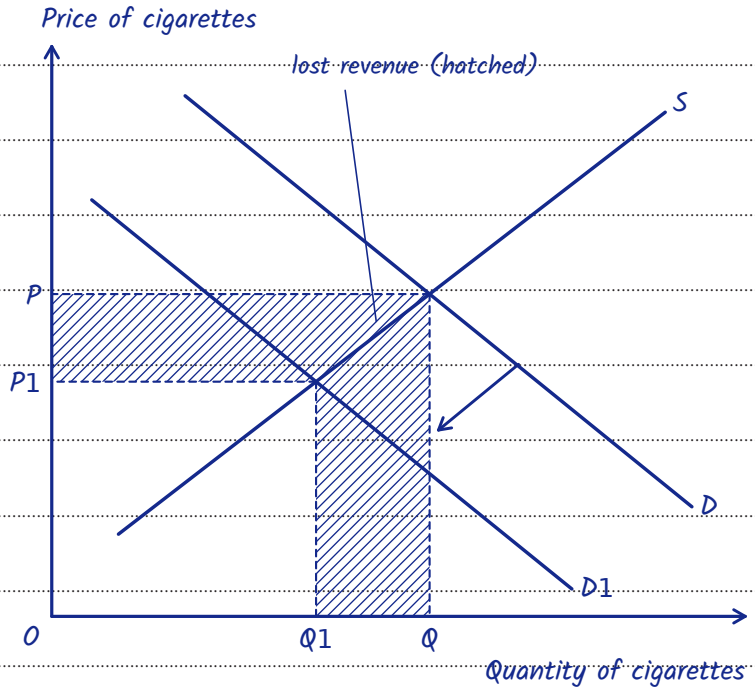
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

6 (a) Explain why 'bans on tobacco advertising' (Extract A, line 7) may result in a decrease in the revenue of tobacco firms. Include a supply and demand diagram in your answer.

(5)

Total revenue is the total income a firm receives from selling its output: price × quantity sold (P × Q).

Advertising makes smoking appear attractive and builds brand loyalty; television and magazine adverts once 'glorified smoking'. Extract A states that bans on tobacco advertising, promotion and sponsorship 'can reduce tobacco consumption'. A ban reduces demand at every price, so the demand curve for cigarettes shifts left from D to D1.



With supply unchanged, the equilibrium moves from P and Q to P1 and Q1, so both the price and the quantity of cigarettes sold fall. Total revenue falls from P × Q to P1 × Q1; the hatched area shows the revenue lost by tobacco firms. Without advertising, brand loyalty may also weaken and demand may become less price inelastic, so firms cannot raise prices to protect revenue.

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

stemup.co.uk

(b) With reference to the information provided and your own knowledge, assess the view that tobacco consumers switching to e-cigarettes is an example of rational behaviour.

(10)

Rational behaviour means consumers aim to maximise their utility, weighing up the costs and benefits of a choice with full information. Figure 1 shows that the single cigarette equivalent price of an e-cigarette is only 7p, compared with 48p for a tobacco cigarette. A smoker who is aware of these financial gains can obtain nicotine far more cheaply, leaving more income for other goods. Smokers are also informed of private health gains: Extract B describes e-cigarettes as 'much safer' and 'less hazardous', and switching reduces the external costs of passive smoking (Extract A). With smoking bans in 48 countries and rising taxes, regulations make it harder to gain utility from tobacco, so switching is logical. Smokers do respond to price: a 10% price rise cuts consumption by 4% (Extract A).

However, smokers may not be fully rational. Under bounded rationality they lack the information and computational skills to assess the full costs and benefits; little research has been done on the long-term health effects of e-cigarettes, so long-term gains could be misjudged. Both products contain highly addictive nicotine, so the switch may reflect habit rather than a considered choice, and without e-cigarettes many might quit altogether. The switch may be an impulse or due to peer pressure (herd behaviour), may be short term, and many use both products, increasing total nicotine consumption. As demand for e-cigarettes is price elastic (−1.9), a price rise could make smokers switch back.

On balance, switching is largely rational for an informed smoker given the large cost and health gains, but addiction and information gaps mean it is better described as bounded rationality.

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

Tobacco cigarettes and e-cigarettes are considered to be substitutes.

(c) Explain how changes in the price of tobacco cigarettes may affect the demand for e-cigarettes over time.

(6)

Cross elasticity of demand (XED) = % change in quantity demanded of e-cigarettes ÷ % change in price of tobacco cigarettes. As substitutes that both supply nicotine, they have a positive XED.

If tax rises increase the price of tobacco cigarettes, demand for e-cigarettes increases and its demand curve shifts right, raising their price and quantity sold. A packet already costs £7.70 to £9.50 against 7p per cigarette equivalent, so the gap widens and switching is more attractive. Because tobacco is addictive, a 10% rise in its price may cause a less than 10% rise in demand for e-cigarettes in the short run, so XED is low. Over time, as e-cigarettes are seen as less harmful and tougher regulation and health awareness hit tobacco, they become closer substitutes, so XED and the effect on demand grow in the long run.

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

stemup.co.uk

(d) With reference to Extract A, lines 11–13, calculate the price elasticity of demand for tobacco cigarettes in high-income countries and in low-middle-income countries. You are advised to show your working.

(4)

High-income countries

PED = % change in quantity demanded ÷ % change in price

= −4% ÷ +10%

PED = −0.4

Low-middle-income countries

PED = % change in quantity demanded ÷ % change in price

= −5% ÷ +10%

PED = −0.5

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

(e) With reference to Figure 1, assess the likely reasons for the difference in price elasticity of demand for tobacco cigarettes and e-cigarettes.

(15)

Price elasticity of demand (PED) measures the responsiveness of quantity demanded of a good to a change in its own price. Figure 1 shows PED for tobacco cigarettes is −0.35, which is price inelastic, so a 10% rise in price reduces quantity demanded by only 3.5%. For e-cigarettes PED is −1.9, which is price elastic: a 10% rise in price reduces quantity demanded by 19%.

The main reason is habitual consumption. Tobacco cigarettes contain nicotine and are addictive and habit forming, so for smokers they are a necessity and they keep buying them when the price rises. E-cigarettes are a newer product; many users are not yet addicted to them and treat them more as a luxury, so they are more responsive to price.

A second reason is the number of close substitutes. Tobacco is broadly defined: if the price of all tobacco cigarettes rises there are few close alternatives apart from illegal cigarettes. In contrast there are many competing e-cigarette brands and kits, and users can easily switch back to tobacco cigarettes if the price of e-cigarettes rises.

Third, the proportion of income spent on the good matters. Tobacco is bought in packets of £7.70 to £9.50, a small regular purchase, whereas an e-cigarette kit costs £9.99 to £19.99 as a one-off switching cost. This higher upfront outlay is a larger share of income, so buyers are more sensitive to its price.

However, the significance of these determinants may change. E-cigarettes also deliver nicotine, which Extract A says is 'highly addictive', so over time they may become habit forming and demand for them more inelastic. Tobacco cigarettes can also be narrowly defined: a rise in the price of one brand leads smokers to switch brands, so demand for an individual brand is far more elastic than −0.35.

As taxes keep rising, the proportion of income spent on tobacco cigarettes is rising, especially for low-income groups, so their demand may become more elastic; this fits the

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

5% fall in consumption in low- and middle-income countries compared with 4% in high-income countries. Tobacco addiction is also waning as smoking has lost its glamour and health warnings grow, and e-cigarettes are becoming closer substitutes, so demand for tobacco is likely to become more elastic.

Time also matters: in the short run smokers struggle to change habits, but in the longer term they respond more to rising tobacco prices. The figures are also estimates averaged across very different consumers, so they may not be reliable.

Overall, the most significant reasons for the difference are addiction and the availability of substitutes: smokers are dependent on tobacco and see few alternatives, whereas e-cigarette users face many brands and can switch back. The gap is likely to narrow as e-cigarettes become habit forming and tobacco faces closer substitutes.

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

EITHER

(f) Evaluate the possible advantages of a free market approach to cigarette consumption.

(20)

OR

(g) Evaluate the impact of government intervention in the cigarette market.

(20)

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 6(f)** ☒ **Question 6(g)** ☒

Write your answer here:

Question 6(f)

A free market approach leaves the allocation of resources in the cigarette market to the price mechanism, without taxes, bans or regulation. The price mechanism has three functions. Prices act as a signal: a rise in demand for e-cigarettes raises their price, signalling to firms that consumers want more. Prices give an incentive: higher prices and profits encourage firms to move resources out of tobacco and into the e-cigarette market. Prices also ration scarce products to those most willing and able to pay. On a supply and demand diagram, rising demand for e-cigarettes shifts their demand curve right while demand for tobacco shifts left, so resources are reallocated automatically.

Following Adam Smith, consumers are free to pursue their own self-interest and smokers will maximise their private utility, deciding what is in their own best interests. Consumers who know the potential harm of smoking may quit, and over a million Britons have already switched to e-cigarettes as 'a less hazardous product' (Extract B), so a reduction in smoking can happen without government intervention as e-cigarettes become popular. Extract B argues that 'health sells': the profit motive means firms want their customers to live long, and any firm with a sound health claim gains a competitive advantage, so firms will move out of tobacco and into e-cigarettes.

Without regulation the e-cigarette market is easier for new firms to enter, improving

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

competition. Competition between manufacturers to maximise profit will drive health improvements and lower costs, making e-cigarettes more price competitive; they already cost 7p per cigarette equivalent compared with 48p. Following Hayek, individuals do not have perfect information but have the best knowledge of their own situation, the price mechanism acts as a communication network and markets are self-correcting, 'long before government failures are even acknowledged' (Extract B). Government lacks the information to make informed decisions; regulating e-cigarettes, banned in many countries, may protect tobacco and be 'a far greater threat to public health than the products themselves'. A free market also avoids illegal markets, which already supply 1 in 10 cigarettes.

However, the price mechanism fails in the cigarette market. Consumption of cigarettes creates negative externalities such as passive smoking and NHS health care costs, so MSC > MSB at the free market output and cigarettes are overconsumed, causing a welfare loss; tobacco is the leading cause of preventable deaths. There are also information gaps and asymmetric information: smokers underestimate the long-term harm, and little research exists on the effects of e-cigarettes, so private utility is distorted. Nicotine is addictive and habit forming, and peer pressure affects young people, so choices may not maximise utility.

Without intervention the oligopolistic power of tobacco firms, which spend tens of billions of dollars on advertising and promotion and challenge regulation (Extract A), would go unchecked. Following Marx, consumers have been exploited by misinformation and, being addicted, become dependent, while the need to maximise profit may lead firms to cut costs at the expense of health and raise prices, reducing consumer surplus, with powerful monopolies emerging. Low- and middle-income countries, home to 80% of smokers, are most at risk.

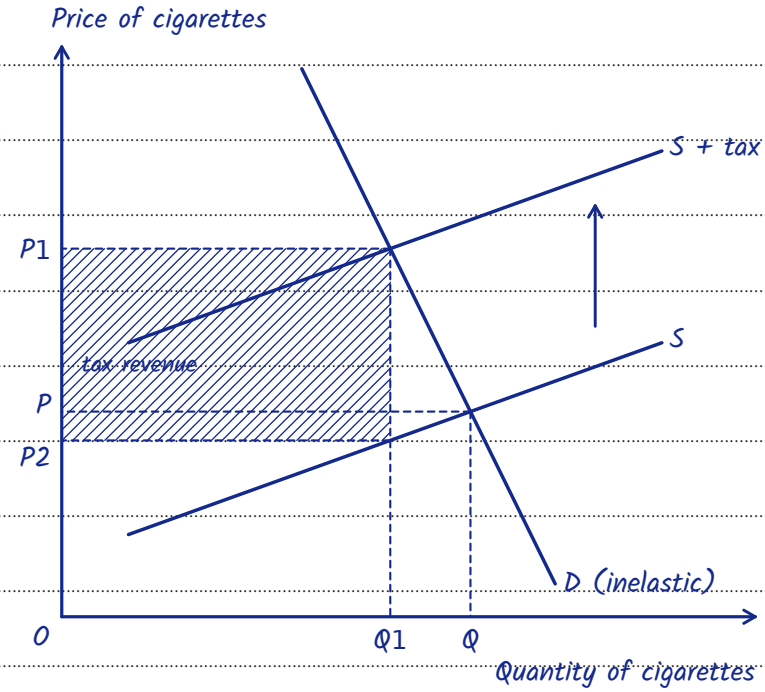
In conclusion, a free market approach has advantages, especially in encouraging innovation and the switch to cheaper, safer e-cigarettes, where light regulation may be best. However, due to externalities, addiction and information failure, it is unlikely to reduce tobacco consumption enough on its own. The best approach depends on the product: a mostly free market for

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

e-cigarettes, combined with provision of accurate information and some intervention for tobacco.

Question 6(g)

Government intervention aims to correct market failure in the cigarette market, where negative externalities such as passive smoking and health care costs, and information failure, mean cigarettes are overconsumed. Indirect taxes, either specific or ad valorem, shift supply left from S to S + tax, raising price from P to P1 and reducing quantity to Q1, as in my diagram. Extract A says taxes are 'the most cost-effective way to reduce tobacco use', especially among the young and low-income groups, and a 10% price rise cuts consumption by 4% to 5%. The tax revenue (hatched) can fund NHS treatment and stop smoking services.



Regulation such as banning smoking in indoor workplaces, public places and transport, now in 48 countries, cuts passive smoking, while advertising bans reduce demand. Provision of information through health warnings and public health campaigns reduces the information gap, and direct provision of nicotine patches and e-cigarettes on NHS prescription, or subsidies for tobacco replacements, help smokers quit. A minimum cigarette price could also prevent cheap sales.

However, intervention can cause government failure, where it results in a net welfare loss.

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

stemup.co.uk

Demand is price inelastic (PED −0.35), so taxes are ineffective: consumption falls only slightly while the price rises sharply, and tax is regressive, hitting low-income smokers hardest. Extract B notes small tax rises and larger warning labels are 'becoming less effective', showing diminishing returns. There are unintended consequences: high prices encourage tobacco smuggling, and the illegal market supplies 1 in 10 cigarettes. Regulating e-cigarettes protects tobacco from competition, while e-cigarettes may act as a gateway to smoking or encourage harm reduction rather than quitting, distorting price signals.

Information gaps also exist for government, as there is little research on the long-term effects of e-cigarettes, and excessive administrative costs may slow e-cigarette innovation. Tobacco firms continuously challenge regulation, and 8 million people are still expected to die each year by 2030.

The impact depends on the extent of intervention and the country: in low- and middle-income countries consumption is more responsive (5%), but enforcement is weaker. In the short run demand is inelastic, but in the long run taxes and bans change habits; smoking is no longer fashionable. Overall, intervention has reduced tobacco consumption significantly, but it works best as a package of taxes, bans and information, with lighter regulation of e-cigarettes.

(Total for Question 6 = 60 marks)

TOTAL FOR SECTION B = 60 MARKS
TOTAL FOR PAPER = 80 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

Every effort has been made to contact copyright holders to obtain their permission for the use of copyright material. Pearson Education Ltd. will, if notified, be happy to rectify any errors or omissions and include any such rectifications in future editions.

stemup.co.uk