Please check the examination details below before entering your candidate information

Candidate surname: StemUp Model Solution

Other names:

Centre Number | Candidate Number

Pearson Edexcel International Advanced Level

Thursday 10 October 2024

Afternoon (Time: 1 hour 45 minutes)

Paper reference **WEC11/01**

Economics

International Advanced Subsidiary
UNIT 1: Markets in action

You must have:
Source Booklet (enclosed)

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 in Sections A, B and C.
- Answer **ONE** question in Section D.
- 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 ▶

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SECTION A

Answer ALL questions in this section.

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

1 Which **one** of the following combinations best summarises how resources are allocated in a mixed economy?

		Price mechanism	Government intervention
☐	**A**	Yes	No
☒	**B**	Yes	Yes
☐	**C**	No	Yes
☐	**D**	No	No

(Total for Question 1 = 1 mark)

2 Which **one** of the following is an example of government failure?

☐ **A** The non-provision of public goods by private sector firms

☐ **B** External costs of production in the manufacture of Tesla cars

☐ **C** Asymmetric information between a private dental practice and its patients

☒ **D** Excessive administrative costs in the provision of state-owned services

(Total for Question 2 = 1 mark)

3 Forward markets are available at one-month, three-month and one-year intervals.

Which **one** of the following is most likely to have a forward market?

☐ **A** Furniture

☒ **B** Currencies

☐ **C** Smartphones

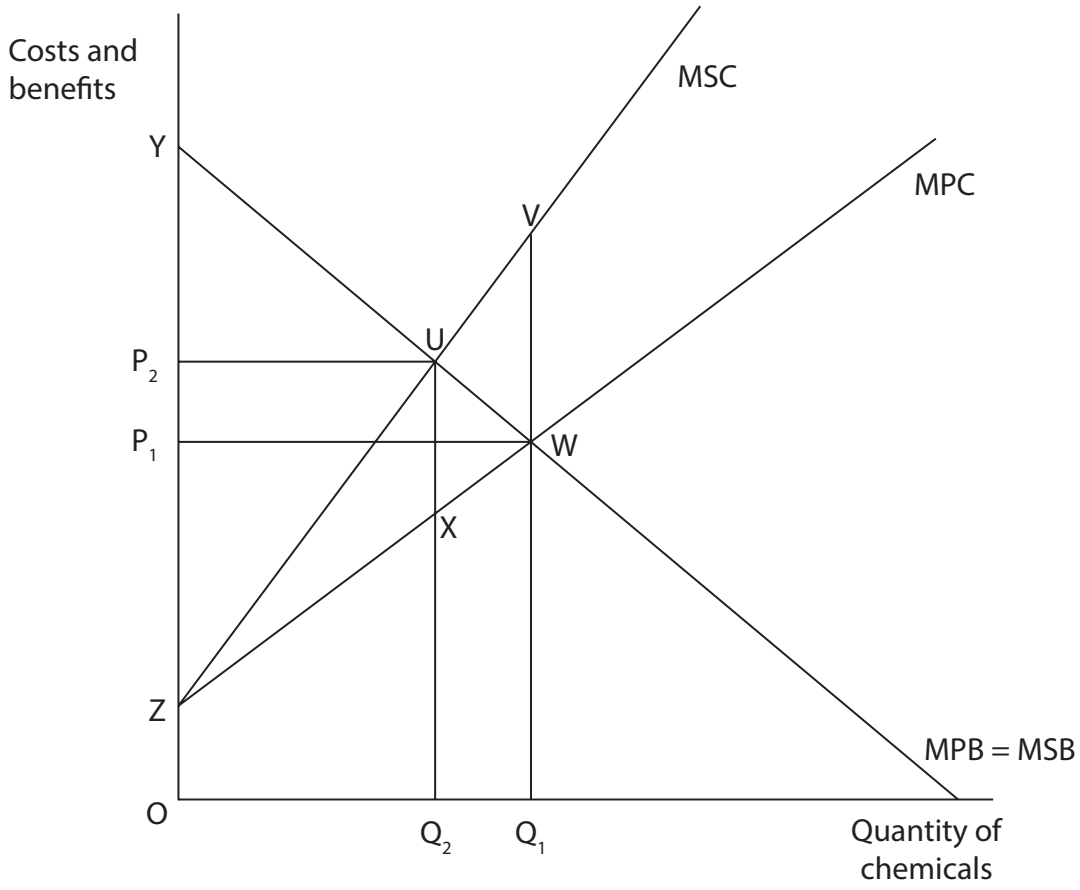
☐ **D** Clothing

(Total for Question 3 = 1 mark)

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4 The diagram shows an externalities diagram for the production of chemicals.



Which **one** of the following shows the area of welfare loss?

- ☒ **A** UVW
- ☒ **B** UWX
- ☒ **C** ZP_1W
- ☒ **D** ZP_2U

(Total for Question 4 = 1 mark)

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5 In the USA the average price of an all-you-can-eat buffet is $20.

The table shows the marginal utility gained from consuming each plate of food from the buffet for a typical consumer.

Plate	Marginal utility
1st	6
2nd	4
3rd	2
4th	1
5th	–2

At which **one** of the following would total utility be maximised?

☒ **A** 2nd plate

☒ **B** 3rd plate

☒ **C** 4th plate

☒ **D** 5th plate

(Total for Question 5 = 1 mark)

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6 The table shows the estimated cross elasticity of demand for selected drinks with respect to a change in the price of soft drinks in Chile.

Drink	Cross elasticity of demand
Milk	+0.25
Coffee	+0.10
Water	+0.63

Which **one** of the following can be deduced from this information?

- ☒ **A** All three goods are complements of soft drinks
- ☒ **B** All three goods are substitutes for soft drinks
- ☒ **C** All three goods are normal goods
- ☒ **D** All three goods are luxury goods

(Total for Question 6 = 1 mark)

TOTAL FOR SECTION A = 6 MARKS

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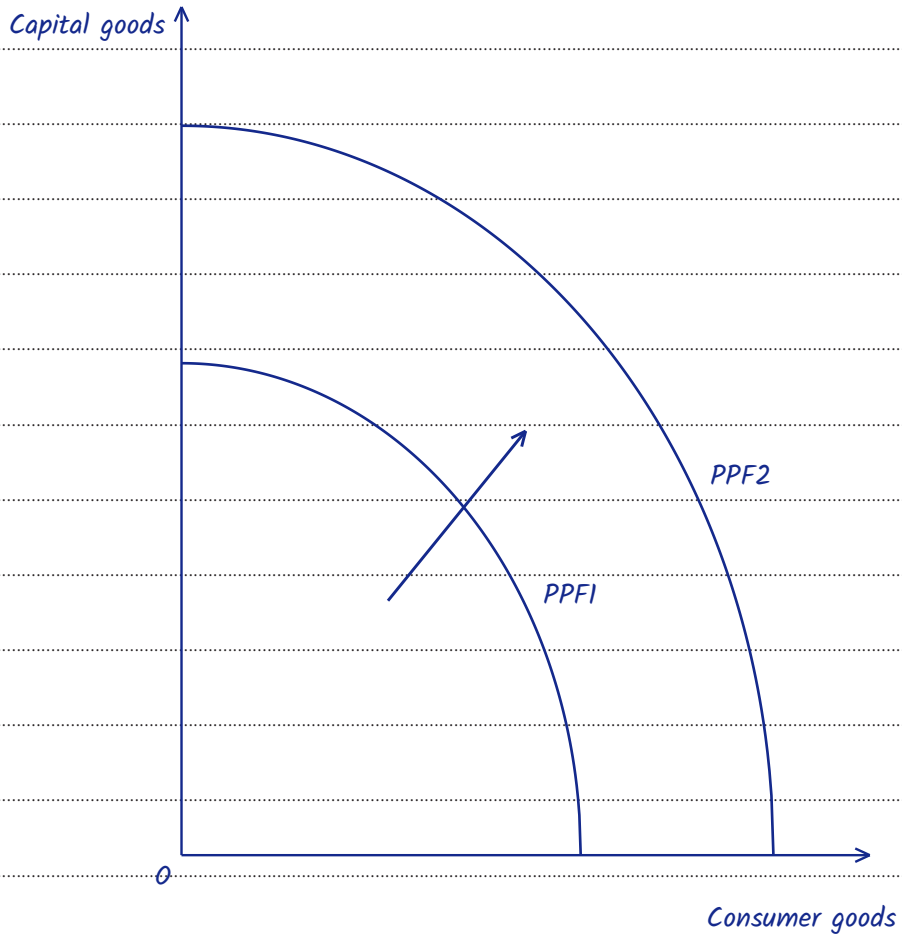
SECTION B

Answer ALL questions in this section in the spaces provided.

7 According to researchers, by 2030, Artificial Intelligence will potentially increase China's output by $7 trillion.

Draw a diagram to illustrate the impact of Artificial Intelligence on China's production possibility frontier (PPF).

Include an arrow on your PPF diagram.



Artificial Intelligence improves technology and raises the productivity of China's existing resources, so more capital and consumer goods can be produced. The PPF shifts outwards to the right from PPF1 to PPF2, showing an increase in productive potential (up to $7 trillion of extra output by 2030).

(Total for Question 7 = 4 marks)

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8 The table shows the estimated price elasticity of demand for energy in selected countries.

Country	Price elasticity of demand for energy
Australia	–0.04
Japan	–0.12
India	–0.15
Philippines	–0.35

With reference to the table, explain **one** factor that is likely to influence the price elasticity of demand for energy.

Price elasticity of demand (PED) measures the responsiveness of quantity demanded to a change in price: PED = % change in quantity demanded ÷ % change in price.

All four countries have price inelastic demand for energy, as every value is between 0 and –1. Demand is most inelastic in Australia (–0.04), where a 10% rise in price cuts quantity demanded by only 0.4%, and least inelastic in the Philippines (–0.35).

One factor is that energy is a necessity with few substitutes. Households need electricity and fuel for heating, cooking, lighting and transport, and firms need it to run machinery. Because it is essential and there are few alternatives to switch to, when the price of energy rises consumers still have to buy almost the same amount, so quantity demanded falls by much less than the price rises and demand is price inelastic.

(Total for Question 8 = 4 marks)

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9 **Statement 1**: "Between 2009 and 2019 extreme weather events and climate-related disasters cost the world economy $1.5 trillion." World Meteorological Organization.

Statement 2: "80% of those surveyed think polluters should pay for their pollution through additional taxes." Survey for the World Economic Forum.

With reference to both statements, explain the difference between normative statements and positive statements.

A positive statement is an objective, value-free statement based on facts, which can be tested and proven true or false using evidence.

A normative statement is a subjective statement that contains a value judgement about what ought to happen, so it cannot be proven true or false by evidence. It often includes words such as "should" or "ought".

Statement 1 is a positive statement: the claim that extreme weather and climate-related disasters cost the world economy $1.5 trillion between 2009 and 2019 is a factual figure that can be checked against data on the costs of these disasters.

Statement 2 is a normative statement: the opinion that "polluters should pay for their pollution through additional taxes" is a value judgement about what ought to happen. Although it is a fact that 80% of those surveyed hold this view, the view itself cannot be proven right or wrong.

(Total for Question 9 = 4 marks)

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10 The table shows the estimated income elasticity of demand for flights in developed countries and in developing countries.

	Income elasticity of demand	Percentage change in real income 2022	
Developed countries	+1.5	+2.5%	1.5 × 2.5 = 3.75%
Developing countries	+2.0	+3.4%	2.0 × 3.4 = 6.8%

Ceteris paribus, calculate the difference between the percentage change in quantity demanded for flights within **developed countries** and the percentage change in quantity demanded for flights within **developing countries**.

Show your workings. You may use the last column for your calculations.

YED = % change in quantity demanded ÷ % change in income

so % change in quantity demanded = YED × % change in income

Developed countries: +1.5 × 2.5% = +3.75%

Developing countries: +2.0 × 3.4% = +6.8%

Difference = 6.8% − 3.75% = 3.05 percentage points

Ceteris paribus, quantity demanded for flights rises by 3.05 percentage points more in developing countries than in developed countries.

(Total for Question 10 = 4 marks)

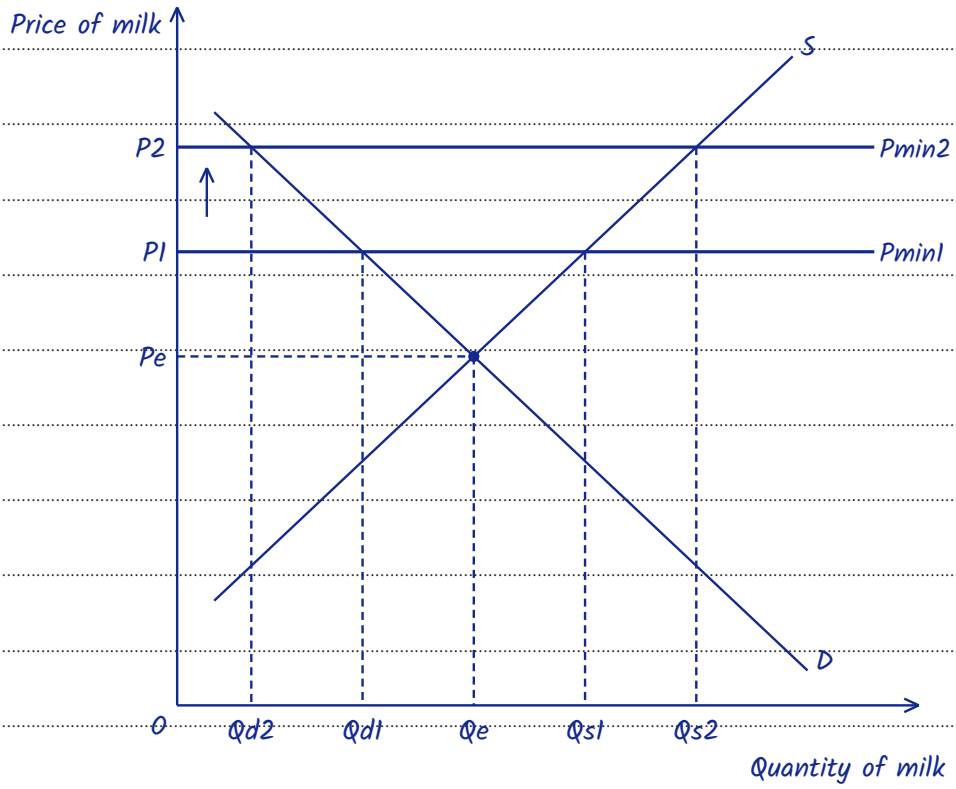
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11 In 2022 the minimum price of milk was set above the equilibrium price in Canada. On 1 February 2023 the Canadian Government increased the minimum price of milk by 2.2%.

Ceteris paribus, explain the likely impact on excess supply of this increase in the minimum price.

Illustrate your answer with a supply and demand diagram.

A minimum price is a legal price floor set by the government above the equilibrium price, below which the product cannot be sold.



At the original minimum price P1, firms supply Qs1 but consumers demand only Qd1, so excess supply is Qs1 – Qd1. When the minimum price rises by 2.2% to P2, quantity demanded contracts from Qd1 to Qd2 and quantity supplied extends from Qs1 to Qs2, as farmers are encouraged by the higher price. So excess supply rises from Qs1 – Qd1 to Qs2 – Qd2.

(Total for Question 11 = 4 marks)

TOTAL FOR SECTION B = 20 MARKS

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SECTION C STARTS ON NEXT PAGE

SECTION C

Study Figure 1 and Extracts A, B and C in the Source Booklet before answering Question 12.

Write your answers in the space provided on the following pages.

12 (a) Define the term 'speculation'. (Extract A, line 7)

(2)

(b) With reference to Figure 1 and Extract A, analyse **one** demand factor and **one** supply factor that caused the price of uranium to more than double between January 2020 and September 2023.

Illustrate your answer with a supply and demand diagram.

(6)

(c) With reference to Extract B, explain whether the supply of nuclear reactors is price elastic or price inelastic.

(4)

(d) With reference to Extract C, examine **two** microeconomic effects of the introduction of an indirect tax on the production of coal.

(8)

(e) With reference to Extract B, discuss the likely effects of subsidies paid to the nuclear power industry on consumers **and** governments.

Illustrate your answer with an appropriate diagram.

(14)

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12 (a) Define the term 'speculation'. (Extract A, line 7)

(2)

Speculation is the buying of a commodity or asset, such as uranium, in the expectation that its price will rise in the future, so that it can be sold later at a higher price to make a profit.

Speculators bought uranium accounting for 25% of annual demand.

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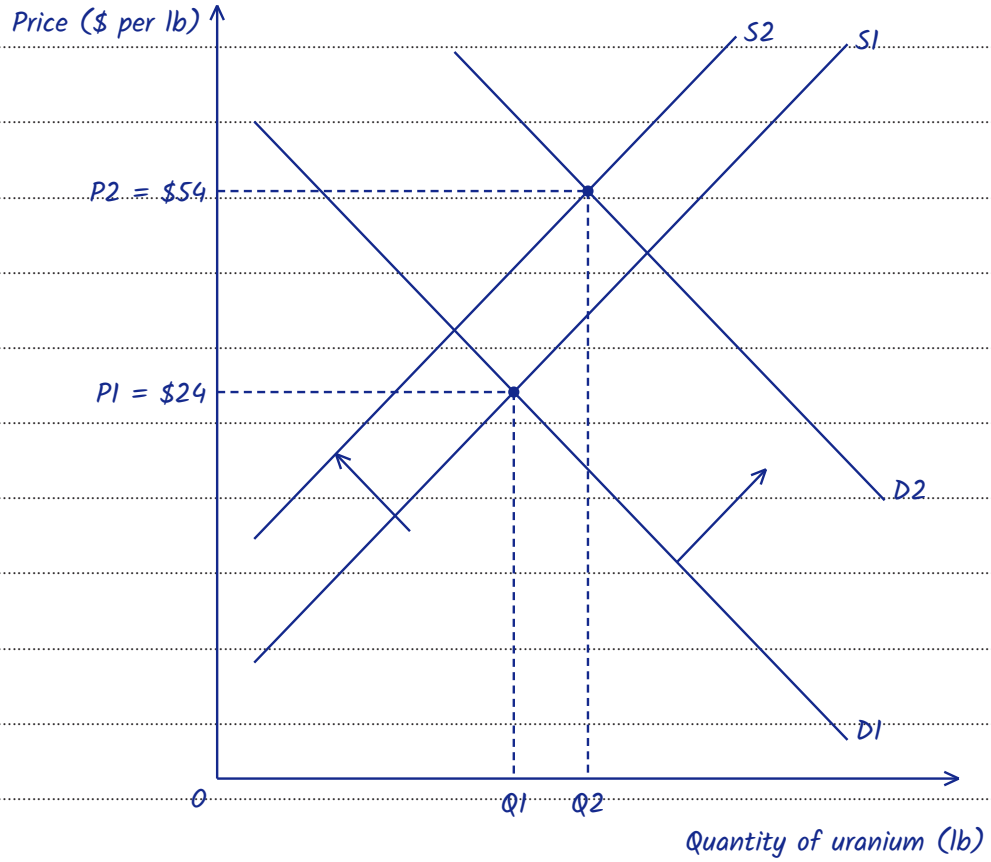
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(b) With reference to Figure 1 and Extract A, analyse **one** demand factor and **one** supply factor that caused the price of uranium to more than double between January 2020 and September 2023.

Illustrate your answer with a supply and demand diagram.

(6)

Figure 1 shows the world price of uranium rose from about $24 per lb in January 2020 to about $54 per lb in September 2023, more than doubling. This was caused by demand shifting right from D1 to D2 and supply shifting left from S1 to S2.



Demand factor: many countries are increasing nuclear power generation, both because the supply of gas is unstable and its price has risen, and to meet international agreements on cutting carbon emissions. Uranium is the fuel for nuclear power, so it has a derived demand. More nuclear power generation means more uranium is demanded at every price, shifting demand from D1 to D2. This was made larger by speculators, who bought uranium equal to 25% of annual demand.

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Supply factor: production was disrupted. Kazakhstan, the world's largest supplier, had problems shipping uranium out of the country, Canada had problems at two mines that cut its production by 9%, and production in France was hit by a lack of critical chemicals. Less uranium is available at every price, so supply shifts left from S1 to S2.

At the original price P1 there is now excess demand, so the price is bid up from P1 ($24) to P2 ($54), and quantity rises slightly from Q1 to Q2 because the demand increase is larger than the fall in supply.

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(c) With reference to Extract B, explain whether the supply of nuclear reactors is price elastic or price inelastic.

(4)

Price elasticity of supply (PES) is the responsiveness of quantity supplied to a change in price:

PES = % change in quantity supplied ÷ % change in price.

Supply is price elastic if PES is greater than 1, so quantity supplied changes more than proportionately to a change in price. Supply is price inelastic if PES is between 0 and 1, so quantity supplied changes less than proportionately.

The supply of nuclear reactors is price inelastic. Extract B shows it took on average 7.5 years to construct each of the 441 reactors, and one reactor in Argentina took 33 years. So even if the price paid for reactors rises, firms cannot quickly increase the quantity supplied, so PES is between 0 and 1, especially in the short run.

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(d) With reference to Extract C, examine **two** microeconomic effects of the introduction of an indirect tax on the production of coal.

(8)

An indirect tax is a tax on expenditure, here on the production of coal, which raises firms' costs of production and shifts the supply curve of coal to the left.

Effect 1: lower external costs. The tax increases the cost of producing coal, so the price of coal rises and the quantity demanded contracts. Electricity generators have an incentive to switch from coal, which provided 40% of Indonesia's energy in 2018, to renewable sources of energy. Less coal is burned, so there is less air pollution and fewer of the 95 155 premature deaths that coal caused in 2018. This moves output closer to the socially optimal level, reducing the welfare loss.

However, the size of this effect depends on the size of the tax and on the PED for coal. Demand from power stations is likely to be price inelastic in the short run, as it takes time for generators to build renewable capacity, so the quantity of coal burned may fall only a little and firms may pass most of the tax on to electricity consumers as higher prices.

Effect 2: the government raises tax revenue, expected to be $3.6 billion per year. Because demand is fairly inelastic, quantity falls only slightly, so the revenue raised is large. The government can use it to compensate those negatively affected by coal, for example paying for healthcare for people with breathing illnesses, or to subsidise renewable energy.

However, coal producers face lower profits. In 2019, 1.96 million people were employed in coal mining, so a fall in output could lead to job losses in mining regions, and Indonesian coal may become less price competitive in export markets that earn $19 billion per year. Overall, the reduction in external costs is likely to be the most significant effect in the long run, provided

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the $3.6 billion is actually used to compensate those harmed and to help coal workers move into new jobs.

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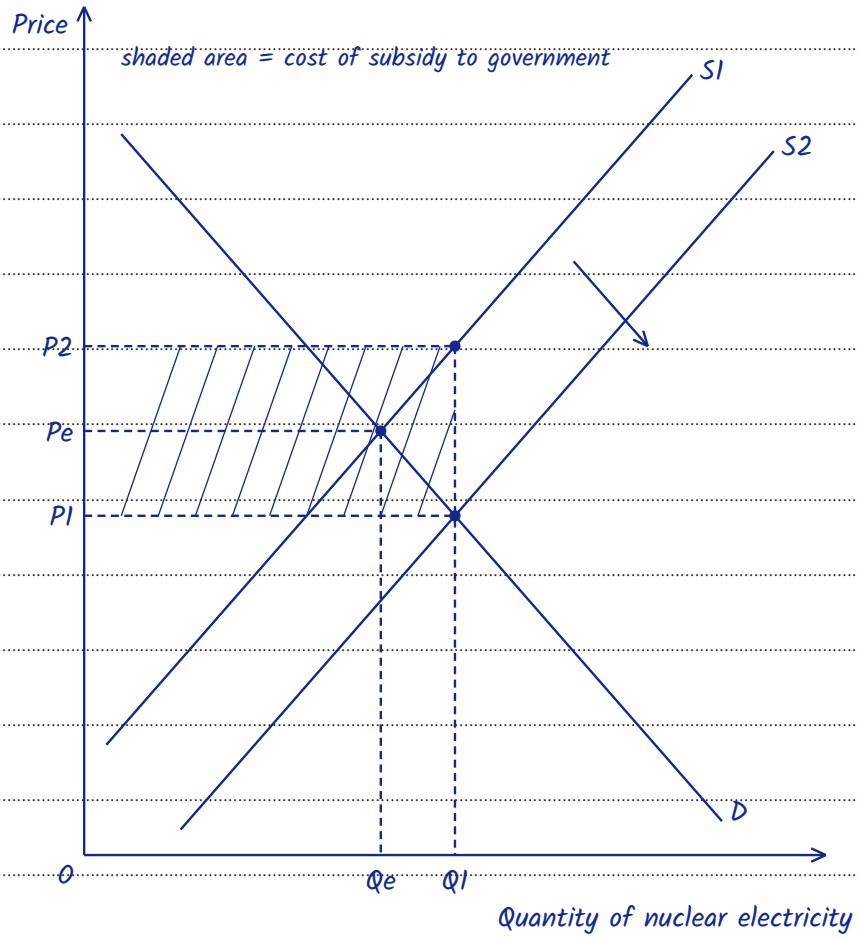
(e) With reference to Extract B, discuss the likely effects of subsidies paid to the nuclear power industry on consumers **and** governments.

Illustrate your answer with an appropriate diagram.

(14)

A subsidy is a payment from the government to producers that lowers their costs of production per unit, encouraging them to increase output. Extract B shows that many governments subsidise nuclear power: the UK Government gave £1.7 billion in 2021, China gave $17 billion in 2023 to build six new reactors, and South Korea will spend $515 million.

The subsidy shifts the supply curve of nuclear electricity to the right from S1 to S2 (S1 – subsidy), as shown in the diagram.



Consumers: the price consumers pay falls from Pe to P1 and the quantity consumed extends from Qe to Q1. Consumer surplus increases by the area Pe to P1 under the demand curve, so

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consumers gain from cheaper electricity. As nuclear plants replace coal and gas-fired power stations, consumers also benefit from cleaner air, since this will contribute to a 13% fall in carbon emissions by 2050, and from more reliable supply, as they are less exposed to the unstable supply and price of gas.

However, the gain for consumers depends on the elasticities. If the supply of nuclear power is very price inelastic, because a reactor takes on average 7.5 years to build, the supply curve shifts very little in the short run and prices may not fall for years. Nuclear power is still only 10% of world electricity, so the fall in household energy bills may be small. Some consumers may also prefer renewable energy and worry about the safety of nuclear waste.

Governments: the cost of the subsidy is the shaded area P2 to P1 multiplied by Q1, paid for out of tax revenue. In return, governments help to meet international agreements on carbon emissions and improve energy security, and the 43% increase in nuclear capacity by 2050 may create jobs and economic growth, which is likely to be popular with voters.

However, there is an opportunity cost: the $17 billion spent by China could have been used on healthcare, education or cheaper renewables. Large nuclear projects often overrun, like the Argentinian reactor that took 33 years, so the final cost may be far higher than planned, and once given, subsidies are hard to remove. The magnitude also varies: China's $17 billion is likely to have a much bigger impact than South Korea's $515 million.

Overall, subsidies are likely to benefit consumers through lower prices and lower emissions in the long run, but the benefits are delayed by the long construction times, while governments face a large and certain cost now. The net effect depends on the size of the subsidy and whether the money could have achieved more if spent on alternatives.

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(Total for Question 12 = 34 marks)

TOTAL FOR SECTION C = 34 MARKS

SECTION D

Answer ONE question from this section.

Write your answer in the space provided.

EITHER

13 In 2022 consumers in the UK who did not switch suppliers for different services at the end of their contracts were paying a total of £1.3 billion more than those consumers who chose to switch suppliers. It is estimated that this applied to:

- 630 000 consumers with mortgages
- 1.5 million consumers with mobile phone contracts
- 7 million broadband consumers.

Evaluate possible reasons why consumers did not switch suppliers for these services.

(Total for Question 13 = 20 marks)

OR

14 The division of labour applies to many types of production and occupation, including:

- in the textile industry, workers are responsible for specific parts of the production process
- in healthcare, workers have different roles including doctors, nurses, cleaners and administrators.

Evaluate the advantages of the division of labour for businesses **and** workers. Refer to an industry of your choice in your answer.

(Total for Question 14 = 20 marks)

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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 13** ☒ **Question 14** ☐

Write your answer here:

Traditional economic theory assumes consumers are rational: they have full information and choose the option that maximises their utility. A rational consumer would switch to the cheapest supplier at the end of a contract, yet in 2022 UK consumers who did not switch paid £1.3 billion more than those who did, across 630 000 mortgage holders, 1.5 million mobile phone users and 7 million broadband customers. Behavioural economics helps to explain this.

Firstly, inertia and habitual behaviour. Comparing broadband or mortgage deals takes time and effort, so many consumers simply stay with their current supplier out of habit. Consumers often use rules of thumb, such as "stay with the provider I know", rather than working out every option. The gain from switching may seem small for one mobile phone contract, so the consumer decides the effort is not worth it and keeps paying the higher price. With 7 million broadband consumers affected, inertia appears to be a very common reason.

However, inertia may be partly rational. If the time and stress of switching is worth more to a consumer than the saving, staying is utility maximising. Also price comparison websites have greatly reduced the search cost of switching, so inertia may now be less significant than in the past, especially for younger consumers who are used to switching online.

Secondly, information failure. Suppliers have more information about their tariffs than consumers, which is asymmetric information. Mortgage and broadband contracts are complex, with introductory offers, fees and add-ons, so consumers may not know that their price rises when the contract ends. Even with the information, many people have weak computational skills and cannot calculate how much they would save, for example comparing interest rates and

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arrangement fees on a mortgage. Because they do not know the true cost, they stay with an expensive supplier.

On the other hand, regulators now require firms to send end-of-contract notifications showing the best available deal, which reduces the information gap. The impact also differs by service: a mortgage is a large, infrequent purchase where mistakes are costly, so consumers are more likely to seek advice from a broker, which may explain why only 630 000 mortgage holders were affected, compared with 7 million for broadband.

Thirdly, the need to feel valued and the influence of others. Many consumers are loyal to a brand and feel valued by their current provider through loyalty rewards or good customer service. Others follow the herd, staying with the bank or network that their family and friends use. Framing also matters: suppliers present renewal offers as "exclusive deals for loyal customers", which makes staying seem like the better choice even when it is more expensive.

Yet loyalty can be a rational choice. If a broadband provider gives a reliable connection and good service, consumers may value this more than a small saving, and herding may actually help consumers if friends recommend good suppliers. Competition authorities also challenge firms that use misleading framing.

Finally, some consumers may be unable to switch. They may be locked into fixed-term contracts with exit fees, or not qualify for a better mortgage because of their credit record. In this case not switching is not irrational but a result of barriers to switching. If all providers raised prices at the same time, the gain from switching would also be small.

In conclusion, the most significant reasons are probably inertia and information failure, as they

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apply to all three services and explain why so many broadband and mobile phone consumers stayed. However, the importance of each reason depends on the service: for mortgages, contract lock-in and eligibility matter more, while for broadband, habit and complexity of deals dominate. Since much of the £1.3 billion comes from avoidable inertia and information gaps, clearer information from regulators and easier switching are likely to reduce the problem over time.

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TOTAL FOR SECTION D = 20 MARKS
TOTAL FOR PAPER = 80 MARKS

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Pearson Edexcel International Advanced Level

Thursday 10 October 2024

Afternoon (Time: 1 hour 45 minutes)

Paper reference **WEC11/01**

Economics

International Advanced Subsidiary

UNIT 1: Markets in action

Source Booklet

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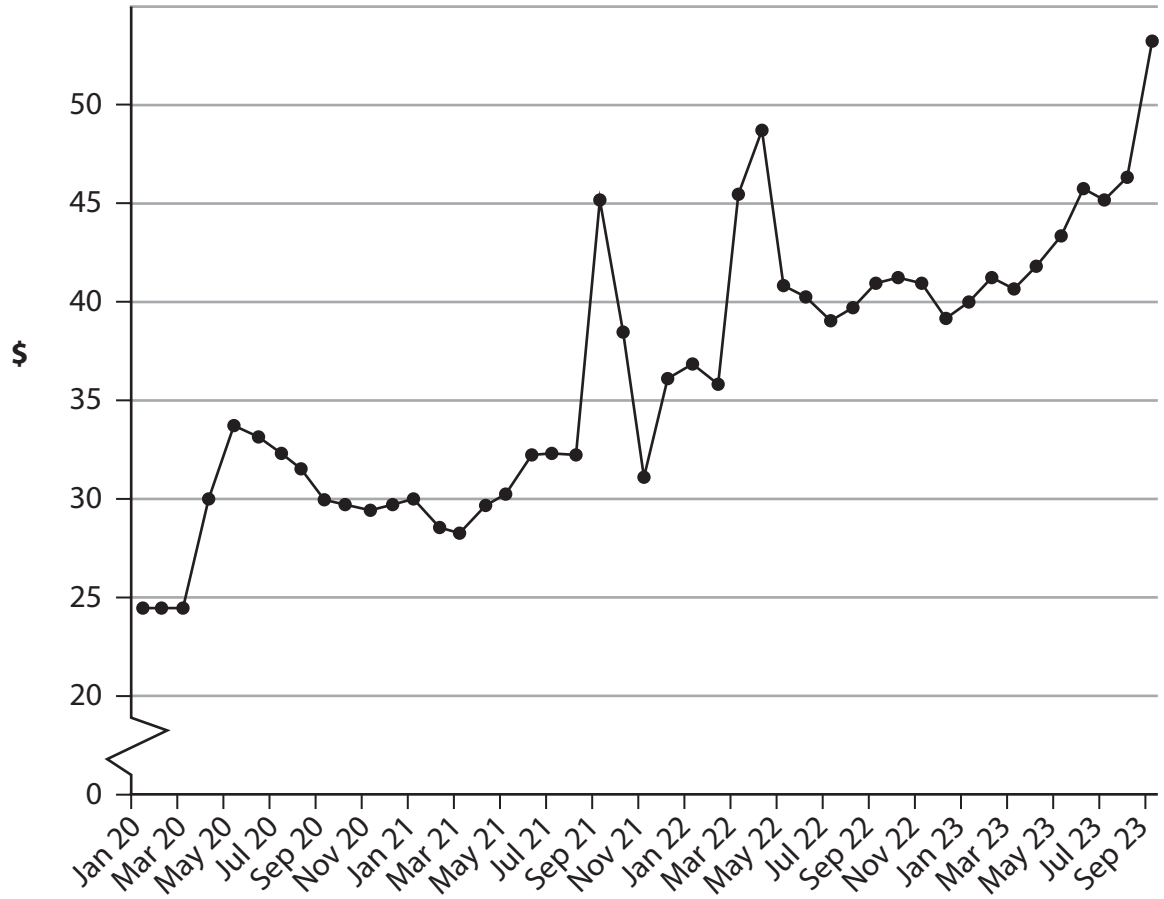
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Sources for use with Section C.

Sources of energy generation

Figure 1: World price of uranium, dollars per pound (lb), January 2020 to September 2023



Extract A Price of uranium

Between January 2020 and September 2023 the price of uranium more than doubled.

Uranium is used to generate nuclear power. Many countries have been increasing nuclear power generation for two significant reasons:

- in response to the unstable supply of gas and the rise in its price
- the need to meet international agreements on reducing carbon emissions.

This increase in nuclear power generation led to speculation in the market for uranium. Speculators bought significant amounts of uranium accounting for 25% of annual demand.

Over the same period, the production of uranium was affected by various factors:

- In France production was disrupted by a lack of critical chemicals
- Kazakhstan, the world's largest supplier, had problems with shipping its uranium out of the country
- Canada had problems at two mines that reduced its production by 9%.

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Extract B Nuclear reactors

In August 2023 there were 441 nuclear power reactors operating in 33 countries. They jointly generated 10% of the world's electricity. By 2050 nuclear capacity is expected to increase by 43%, when an additional 60 nuclear reactors will have become active. The replacement of coal and gas-fired power stations with nuclear power will contribute to a 13% reduction in carbon emissions by 2050. It took, on average, 7.5 years to construct each of the 441 nuclear reactors. However, one reactor in Argentina took 33 years to construct.

Many governments are subsidising the nuclear power industry. For example:

- In 2021 the UK Government provided subsidies of £1.7 billion
- In 2023 the Government of China provided $17 billion in subsidies for the building of six new reactors
- The Government of South Korea will spend $515 million subsidising the nuclear industry.

Extract C Coal tax in Indonesia

The Government of Indonesia plans to introduce an indirect tax on the production of coal. In 2018 coal accounted for 40% of the energy generated in the country and caused 95 155 premature deaths. By taxing coal, the Government can use the revenue to compensate those who are negatively affected. It will also create an incentive for electricity generators to switch from coal to renewable sources of energy. This tax is expected to raise $3.6 billion per year. In 2019 there were 1.96 million people employed in coal mining and coal exports earned $19 billion per year.

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Acknowledgements

Figure 1 adapted from:
https://www.statista.com/statistics/260005/monthly-uranium-price/

Extract A adapted from:
'Rod stewards', The Economist, 23 September 2023

Extract B adapted from:
https://www.world-nuclear.org/information-library/current-and-future-generation/nuclear-power-in-the-world-today.aspx

'How long does it take to build a nuclear power plant?', Energy Matters, July 2016, https://euanmearns.com/how-long-does-it-take-to-build-a-nuclear-power-plant/

'Government pledges £1.7bn of public money to new nuclear plant', Jillian Ambrose, The Guardian, 27 Oct 2021, https://www.theguardian.com/environment/2021/oct/27/government-pledges-17bn-of-public-money-to-new-nuclear-plant

'South Korea to spend $515 million on the nuclear energy sector' Megha Besuccess, Korean Tech Today, April 2023. https://www.koreatechtoday.com/south-korea-to-spend-515-million-on-the-nuclear-energy-sector/

Extract C adapted from:
'Taxing Goal to Hit the Goals' Theresia Betty Sumarno, Tara Laan, International Institute for Sustainable Development, August 2021, https://www.iisd.org/system/files/2021-08/taxing-coal-indonesia-reduce-carbon-emissions.pdf