

Candidate Name  
Candidate Number  
Centre Name  
Centre Number


**Paper 2: Economics**

**For Examination December 2023**

(2 Hours)

It is necessary to respond on the answer sheets provided alongside this question paper. Additionally, you must have a soft pencil (preferably of type B or HB), a clean eraser and a dark blue or black pen.

**INSTRUCTIONS:**

- You must write your name, candidate number, centre name and centre number on the answer sheets in the designated spaces.
- Attempt all the questions required using a dark blue or black pen.
- It is important to follow the instructions provided on the answer sheets.
- Do not use correction fluid.
- Avoid writing on any bar codes.

**INFORMATION:**

The total number of **marks for this paper is 70**. The number of marks assigned for every question or its parts is indicated within brackets [ ].

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## **Scenario A**

The UK government implemented a new tax policy aimed at reducing carbon emissions in the transportation sector. As part of this policy, a carbon tax of £50 per ton was imposed on all transportation companies. In response, the price of gasoline increased by 12 pence per litre, leading to a decrease in the quantity demanded from 45 million litres to 35 million litres per month. Additionally, the government allocated subsidies worth £20 million to support the development of electric vehicle infrastructure.

**(Q1a)** Calculate the total revenue generated from the carbon tax on gasoline before and after the price increase.

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**(4 marks)**

**(Q2a)** Determine the price elasticity of demand for gasoline following the price increase.

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**(6 marks)**

**(Q3a)** Illustrate the impact of the carbon tax on the gasoline market using a demand and supply diagram.

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**(6 marks)**

**(Q4a)** Explain how the elasticity value obtained in question b influences the effectiveness of the carbon tax policy in reducing carbon emissions.

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**(8 marks)**

**(Q5a)** Evaluate the effectiveness of the government's subsidy policy on electric vehicle infrastructure in achieving its goal of reducing carbon emissions.

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**(8 marks)**

**(Q6a)** Analyse the incidence of the carbon tax, also considering who bears the majority of the tax burden, consumers, or producers.

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**(10 marks)**

**(Q7a)** Discuss two other policies the government could implement to further reduce carbon emissions in the transportation sector.

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**(12 marks)**

**(Q8a)** Construct a cost-benefit analysis comparing the implementation of the carbon tax policy with an alternative policy to decrease carbon emissions in the transportation sector.

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**(16 marks)**