

Candidate Name
Candidate Number
Centre Name
Centre Number

Paper 3: Economics**For Examination December 2023**

(3 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 (in both sections) 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 50**. The number of marks assigned for every question or its parts is indicated within brackets [].

Section A: Case Study

The advent of technological advancements has been reshaping industries globally, altering the dynamics of labour markets. One such industry significantly impacted is the automotive sector. Over the past few decades, automation and robotics have revolutionised automobile manufacturing processes, leading to increased efficiency and productivity. However, these technological advancements have also raised concerns about potential job displacement and altered the skill sets required in the labour force. In 2008, CarTech Inc., a leading automobile manufacturing company, introduced robotic assembly systems across its production lines in response to the increasing demand for their vehicles. The implementation of these automated systems significantly improved production efficiency by streamlining assembly processes, reducing errors, and increasing output by 40%. Consequently, the company experienced a reduction in the number of employees required for assembly line operations. Over the course of two years, CarTech Inc. downsized its labour force by 30%, leading to protests from labour unions and concerns among employees about job security. Simultaneously, the remaining employees underwent retraining programs to operate and maintain the newly implemented robotic systems. This transition demanded a higher skill set involving technological expertise and problem-solving abilities. While some workers adapted well to the changes, others struggled to acquire the necessary skills, leading to job dissatisfaction and increased turnover rates.

CarTech Inc. responded to the workforce challenges by collaborating with local educational institutions and vocational training centres to design specialised courses aimed at upskilling its employees. These programs focused on robotics, automation, and advanced manufacturing techniques, aiming to equip the workforce with the necessary expertise to operate and maintain the newly introduced technology. However, the success of these programs varied among employees, highlighting the importance of personalised and ongoing training initiatives to address diverse skill gaps effectively. Moreover, the implementation of robotic assembly systems not only impacted the assembly line workers but also influenced the company's organizational structure. CarTech Inc. witnessed a restructuring in job roles, with a surge in demand for positions requiring technological proficiency, such as robotics engineers, data analysts, and maintenance technicians. This restructuring created opportunities for some employees to transition into higher-skilled positions, albeit requiring additional training and education, while others faced challenges in adapting to these new roles or were unable to participate due to skill disparities. The shift towards automation also had broader economic implications beyond the company itself. While CarTech Inc. experienced increased productivity and cost efficiency, the local community faced repercussions due to reduced employment opportunities. The decline in job availability in the automotive sector affected auxiliary industries, such as suppliers and service providers, leading to economic ripples felt across the region. Local policymakers and community leaders grappled with strategies to diversify the economy and provide alternative employment opportunities to mitigate the adverse effects of job losses.

In response to public concerns and ongoing debates about the societal impacts of automation, CarTech Inc. initiated dialogues with stakeholders, including labour unions, government representatives, and advocacy groups, to address ethical considerations. Discussions centered on ethical frameworks for implementing automation, ensuring responsible practices, and considering measures to safeguard the welfare of workers affected by technological shifts. This collaborative approach aimed to strike a balance between technological advancement and social responsibility, fostering a sustainable and inclusive transition in the industry.

(Q1a) Analyse the economic rationale behind CarTech Inc.'s decision to introduce robotic assembly systems despite the initial job displacement.

(10 marks)

(Q2a) Evaluate the short-term and long-term effects of technological automation on the labour market, considering the impact on employment levels and skill requirements.

(10 marks)

(Q3a) Judge the role of government policies in managing the transitional challenges faced by the workforce due to technological advancements, outlining potential measures to address job displacement and skill gaps.

(15 marks)

(Q4a) Discuss the ethical considerations and societal implications associated with the increasing reliance on automation in industries like automotive manufacturing while considering the balance between efficiency gains and the well-being of the labour force.

(15 marks)