Additional study question 1 (consolidation): Answer notes

## Question

A small independent car manufacturer based in Yorkshire has traditionally hand-built all of its vehicles using a small team of local engineers.

As more orders come into the business, the company has invested in robotic equipment to carry out certain repetitive tasks, such as welding, that used to be carried out by hand.

Evaluate the impact of this transition to autonomous operation on the business and its employees.

Your evaluation should include:

* benefits and drawbacks of this transition on both the business and its employees;
* a supported conclusion on the overall impact of automation on the business.

[12 marks, plus 3 marks QWC]

# Answer notes

## Command verb

* Evaluate. Review information and bring it together to make judgements and conclusions from available evidence. Students may also use their own understanding to consider evidence for and against.
* Make sure to present benefits *and* drawbacks. These can then be used to create a supported conclusion.

## Impacts on business

* **Efficiency**: robots are more efficient and more productive than humans. They can work 24/7 with no breaks or holidays.
* **Cost**: there are high initial costs, but there are ongoing cost savings such as labour costs, fewer errors, more efficient use of materials/less wastage.
* **Scalability**: businesses can grow without relying on additional human resources.
* **Quality**: robots are more reliable, with repeatable accuracy to fractions of a millimetre. Humans make mistakes that can affect quality.

## Impacts on employees

* **Job automation:** there may be a reduction in staff as automation can reduce the need for a larger workforce.
* **Training and development:** automation means that job roles could change. This may mean employees need to retrain or upskill to remain employable.
* **Safety:** there is a reduction in the risk of potential injuries in the workplace.
* **Wellbeing:** uncertainty about job security needs to be well-managed, and employee support put in place for all outcomes.

# Mark scheme guidelines (generic)

|  |  |  |
| --- | --- | --- |
| Band | Mark | Descriptor |
| 4 | 10-12 | AO3 Analyse and evaluate the question scenario in a comprehensive, effective and relevant way that shows detailed understanding.AO2 Apply detailed knowledge and understanding of the question scenario in different situations and contexts.AO1 Demonstrate a wide range of knowledge and understanding to the question scenario.The answer demonstrates comprehensive breadth and/or depth of understanding. |
| 3 | 7-9 | AO3 Analyse and evaluate the impact of the question scenario in a way that is mostly effective and mostly relevant.AO2 Apply mostly relevant knowledge and some understanding of the question scenario in different situations and contexts.AO1 Demonstrate mostly accurate knowledge and understanding of the question scenario.The answer demonstrates reasonable breadth and/or depth of understanding, with occasional inaccuracies and/or omissions. |
| 2 | 4-6 | AO3 Analyse and evaluate the question scenario in a way that is some parts effective with some relevance.AO2 Apply some, but limited knowledge and understanding of the question scenario in different situations and contexts.AO1 Demonstrate some knowledge and understanding of the question scenario in a limited way.The answer is basic and shows limited breadth and/or depth of understanding, with inaccuracies and omissions. |
| 1 | 1-3 | AO3 Analyse and evaluate the question scenario in a way that is minimal with very limited relevance.AO2 Apply general knowledge and awareness of digital working on workplace culture and how to support workers in different situations and contexts.AO1 Demonstrate minimal awareness of the question scenario in a minimal way.The answer has isolated points, showing very minimal breadth and/or depth of understanding, with significant inaccuracies and omissions. |
|  | 0 | No creditworthy material |

# QWC Mark scheme guidelines (generic)

|  |  |
| --- | --- |
| Mark | Descriptor |
| 3 | The answer is clearly expressed and well-structured. The rules of grammar are used with effective control of meaning overall. A wide range of appropriate technical terms is used effectively. |
| 2 | The answer is generally clearly expressed and sufficiently structured. The rules of grammar are used with general control of meaning overall. A good range of appropriate technical terms is used effectively. |
| 1 | The answer lacks some clarity and is generally poorly structured. The rules of grammar are used with some control of meaning and any errors do not significantly hinder the overall meaning. A limited range of appropriate technical terms is used effectively. |
| 0 | There is no answer written or none of the material presented is creditworthy.OrThe answer does not reach the threshold performance level. The answer is fragmented and unstructured. The errors in grammar severely hinder the overall meaning. |