## Question 1

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{\%}$ | 30 | 9 | 13 | 15 | 16 | 10 | 6 | $\mathbf{2 . 3}$ |

Some issues that may have been described include the following.

## Inputs

- Procurement (supply of inputs) - ensure suppliers are ethical and socially responsible. Use of these practices may cost more and may require time and effort to investigate.
- Fair dealing with suppliers - prompt payment may cause cash flow problems.
- Local versus overseas supplier - Local suppliers create jobs for local communities that spend wages, which benefit the local community, whereas using overseas suppliers reduces this.
- Overseas suppliers increase transportation internationally, causing rises in greenhouse gas emissions and increases in environmental costs.
- Environmentally sustainable inputs - cost more and may not be available locally.


## Process

- OH\&S (beyond legal requirements), improved outcomes for staff, less time lost through injuries, but can be costly through rewriting of procedures, providing safety equipment, etc.
- Training - benefits staff by upskilling, increasing motivation, but loss of time while employees are trained.
- Efficient use of resources - minimising waste.


## Outputs

- Create good products that provide value - fit for intended purpose and provide value for money.
- Packaging decisions - aim to minimise packaging to reduce environmental footprint while still considering perishable items and hygiene.

The following is an example of a high-scoring response.
Ethical management refers to abiding by morals and standards and doing the right thing in the interests of the stakeholders. Social responsibility refers to the obligations of the LSO over and above its legal requirements to benefit the community and environment. The elements of the operations system are inputs, processes and outputs.

Alice could be ethically and socially responsible in terms of inputs by sourcing her materials from an ethical and socially responsible supplier. This would mean that the supplier would not exploit labour and would be environmentally friendly.

Processes refer to the activities undertaken in turning inputs into outputs. An ethical and socially responsible issue which Alice may consider from the processes element would be to conduct all production of the books at the organisations' own factory. This is being ethical and socially responsible as it means that Alice may be able to offer more employment opportunities to the community, or to provide variation in employees' tasks due to the organisation not outsourcing production.

Outputs refer to the final product/service at the end of the transformation process. In order to be socially responsible and ethical here, Alice may ensure that the final output is fit for purpose, and contains only truthful information regarding travelling, ensuring that she is applying moral standards and is not misleading customers.

## Question 2

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{\%}$ | 23 | 12 | 15 | 17 | 15 | 10 | 8 | $\mathbf{2 . 5}$ |

Inputs are human skills and effort, raw materials, facilities, machinery and equipment. Ethical and socially responsible management practices at this phase include fair dealing with suppliers, using environmentally sustainable inputs, supply of inputs from ethical and socially responsible suppliers, staff-friendly facilities and technology, and minimising the use of energy as an input.

Processing is the transformation stage that inputs undergo to become outputs. Ethical and socially responsible management practices include respectful employment practices, $\mathrm{OH} \& S$, customer relations and appropriate disposal of waste.

Outputs are the finished good or service provided by the organisation for sale. Ethically and socially responsible practices include honest marketing, product reliability, product safety and customer health, benefit to society and sensitivity to community values.

The following is an example of a high-scoring answer.


#### Abstract

Social responsibility refers to commitment to society beyond legal obligations and ethics refers to deciding what is right and wrong in terms of moral standards. Inputs refer to materials used in production such as nails, wood, time and money. Being ethical and socially responsible with the use of inputs could include purchasing from socially responsible suppliers that do not exploit or purchasing environmentally sustainable materials. This would mean that inputs are more expensive but would also result in increased customers and market share. Processes refer to transforming resources (inputs) into goods and services (outputs) being ethical and socially responsible in processes could involve reducing waste by recycling, changing disposal of waste methods and reducing pollution in processes. This may mean slower production but will increase profit in the long run. Outputs refer to the final outcome, what the customer pays for. Being socially responsible with outputs could mean ensuring that products are reliable, fit for their stated purpose and benefit society in some way, without causing harm to customers. This could involve quality management such as quality control which could slow down productivity because it is time consuming but since customers often prefer buying from these organisations it will result in increased customers, sales, market share and competitiveness. Therefore being ethical and socially responsible leads to increased profitability.


## Question 3

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\%$ | 41 | 21 | 31 | 7 | $\mathbf{1 . 1}$ |

The following is an example of a high-scoring response.


#### Abstract

Shandra's Dairy Ltd could make use of the just in time approach. This is where the right amount of materials arrive in operations just as they are needed. Using the JIT approach would improve efficiency as it would ensure that the business is not oversupplied with materials so that resources are not expended on maintaining large stockpiles and production can continue to flow with the right amount of materials arriving when needed. It can also improve effectiveness as by ensuring that materials arrive to order at Shandra's Dairy Ltd, they will consistently have the right quantities that are required to meet dairy production.


## Question 4

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | Average |
| :---: | :---: | :---: | :---: | :---: |
| \% | 37 | 16 | 47 | $\mathbf{1 . 1}$ |

The differences between manufacturing and service organisations include

- a manufactured product is tangible, whereas a service is intangible
- production and consumption occur separately in manufacturing and simultaneously in service
- manufactured goods can be stored; services are unable to be stored
- manufactured goods tend to be standardised, while services tend to be tailored to an individual
- manufactured goods usually have minimal customer contact in the processing stage, whereas there are high levels of customer contact in services.

The following is an example of a high-scoring response.

Manufacturing organisations provide outputs which are tangible and can be stored. For example, chocolate can be touched and stored to eat later (as in Webster's). Conversely, service organisations produce outputs which are intangible and cannot be touched or stored. They are created at the same time of consumption, such as receiving a flight service whilst on board the plane.

## Question 5

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{\%}$ | 44 | 22 | 19 | 15 | $\mathbf{1 . 1}$ |

Manufactured goods can be stored; services are consumed as they are created. Goods are tangible; services are intangible. Goods can be standardised; services are often tailored. Goods have minimal customer contact; services have high customer contact.

The following is an example of a high-scoring answer.

Manufacturing organisations transform inputs into tangible products that can be touched and stored, whereas service organisations transform inputs into intangible services.

In a service, production and consumption usually occur simultaneously, for example getting a haircut, whereas in the production of a good they are quite separate.

A service allows for a high degree of customer interaction as it is often tailored to a customers needs, whereas a good is often standardised and mass produced.

## Question 6

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\%$ | 39 | 16 | 18 | 14 | 13 | $\mathbf{1 . 5}$ |

- Total quality management (TQM) is a quality philosophy that involves continuous improvement, a strong customer focus and employee participation, attempting to improve quality at every stage of the production process.
- Quality assurance involves an external organisation that audits against national or international standards. If the standards are met, the organisation can display the certification; for example, ISO standards.
- Quality control involves four stages: establish quality benchmarks or standards to be achieved, use sampling techniques to carry out inspections of performance, compare results with established/standards/benchmarks and take corrective action if necessary.

The following is an example of a high-scoring response.
The management of quality can be done through the strategy of quality assurance or total quality management. Quality assurance involves gaining quality certification from an external body that has set predetermined quality standards which the organisation must meet. These are often known as ISO standards. If Websters uses quality assurance it guarantees all products produced in the operations system are of a high quality or they are not allowed to be sold.

The other strategy Sam could employ is known as total quality manag ement where all employees in the operations system are encouraged to be continually striving for high quality in all they produce. Sam could organise groups known as quality circles where they discuss options on how to make their products even better. This approach is also viable to ensure that Websters produce high quality chocolate products, which is necessary to improve their competitiveness.

## Question 7

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{\%}$ | 5 | 11 | 21 | 27 | 21 | 10 | 5 | $\mathbf{3}$ |

Examples that students may have discussed included the following.

- Workers will need to be upskilled, so more training is required, which is costly in both time and money.
- Technology often replaces employees, thus leading to job losses.
- Technology can be expensive to introduce and ongoing maintenance can be expensive.
- Technology often creates efficiencies and flexibility and leads to improved customer service, but can also be impersonal, which may lead to reduced customer service.
- Technology minimises waste in inputs, but can create landfill from obsolescence.
- Technology enables organisations to respond more quickly to customer requirements.
- Technology can improve standardisation of work processes and consistency of outcomes.
- Technology may disadvantage the elderly, infirm or disabled who are unable to use it.

The following is an example of a high-scoring response.
Technology is a strategy to optimise operations, using computers and software which enhance production. The positive consequences of technology in operations are that it reduces human error throughout the large production process. It can also lead to an increase in the quality of outputs through refinement undertaken which cannot be achieved by humans. Finally, it speeds up the operations system because technology such as robotics, which are highly specialised computerised technology, have the ability to undertake several complex tasks at once and do not require breaks or holidays.

However, the negative consequences of using technology in optimising operations are that there is generally a very high initial cost to the organisation to introduce it, and even then it is not guaranteed to achieve organisational objectives even though it will optimise operations. Additionally, employees may be made redundant because their role has been overtaken by technological applications thus creating unease amongst the entire workforce as the fear of losing their jobs too. Finally, it can be a very time consuming process to implement the new technology and adequately train employees to use it with confidence.

## Question 8

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | Average |
| :---: | :---: | :---: | :---: | :---: |
| $\%$ | 19 | 45 | 36 | $\mathbf{1 . 2}$ |

High-scoring responses to this question provided more than just a definition of lean management. They described at least two principles underlying the concept of lean management.

The following is an example of a high-scoring response.
Lean management is a systematic process for the elimination of waste that involves taking out all aspects that do not add value to the end product, and only consisting of what is appealing to the customer. The principles of this include the system of Just-In-Time (where goods arrive just as they are required in the production process), Kaizen which refers to continuous improvement in the organisation and its production processes, and the use of automation (which refers to replacing processes that could be conducted by humans with technology). This aims to increase productivity whilst decreasing the amount of unnecessary wastage.

## Question 9

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\%$ | 33 | 22 | 23 | 14 | 7 | $\mathbf{1 . 4}$ |

The following is an example of a mid- to high-scoring response. This response would have benefitted from a more specific relationship to the case material.

Heidi may implement lean through considering the 'Pull' principle. By letting customer demand pull the business, they're more likely to generate less waste as they're only manufacturing the outputs they will sell. This decreases the amount of idle stock from perishing, decreasing the amount of waste at Small goods.

Heidi may also decide to implement the principle 'Zero Defects' in which the business must strive for perfection. Doing so will mean that levels of waste will decrease as there are less defects going to waste rather than being sold. This efficient use of resources will also act to increase profits as they're maximising outputs whilst minimising waste.

## Question 10

| Marks | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | Average |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\%$ | 40 | 21 | 20 | 15 | 4 | $\mathbf{1} .3$ |

The following is an example of a high-scoring response.
Quality control is where the business ensures its goods or services adhere to a set of quality criteria by performing checks at regular intervals during production. Whereas total quality management is a system based on the principle that every member of staff is committed to maintaining high standards of work in all aspects of operations. Both of these strategies can be implemented by a business to see a significant improvement in the standard of quality of outputs. Both of these strategies also incorporate the use of corrective action by staff to ensure that defects are minimised and outputs meet expected value. However, quality control is reliant upon developing an initial set of standards to which the quality of items are compared to, whereas total quality management is focused on ongoing improvements and developments that are mediated by employees. In QC, employees are only involved in performing the regular
checks and are less empowered, whereas in TQM they are empowered to find solutions and innovations.

