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Business management Higher level and standard level Paper 1

29 April 2026

Zone A afternoon | **Zone B** afternoon | **Zone C** afternoon

1 hour 30 minutes

Instructions to students

- Do not open this examination paper until instructed to do so.
- Read the case study carefully.
- Section A: answer all questions.
- Section B: answer one question.
- You are permitted access to a calculator for this paper.
- The maximum mark for this examination paper is **[30 marks]**.

Abraca (ABC)

Abraca (ABC), a publicly held company, is Country Z's largest concrete producer. *ABC* purchases large quantities of limestone and clay aggregates to manufacture cement to make concrete. Half of the world's buildings are made from concrete.

5 As part of *ABC*'s research into using recycled products as aggregates in concrete, *ABC*'s scientists discovered, by chance, a process to recover gold and other precious metals from electronic circuit boards (e-waste) at room temperature. Previously, the only way to recover precious metals from circuit boards was by burning them at extremely high temperatures, which is a carbon-intensive process. Circuit boards from discarded electronic products, such as computers, mobile (cell) phones and games consoles, create 50 million tonnes of e-waste globally every year. Only 20 % of
10 this e-waste is recycled, with 80 % of it going to landfill.

In 2024, *ABC* opened a factory to process e-waste. Weekly, this factory processes 100 tonnes of circuit boards. Annually, it recovers hundreds of kilograms of gold, which *ABC* sells to jewellery makers.

ABC is considering:

- 15 • increasing efficiencies in its current concrete production
- methods to reduce its impact on the environment
- becoming more market-orientated
- growth options.

20 *ABC*'s factory operates every day of the year and uses mass/flow production. E-waste is delivered to the factory and sent to plastic-shredding machinery. The shredded e-waste is then mixed with chemicals to separate the gold. *ABC* pays suppliers \$0.50 per kilogram of e-waste. The variable costs of extracting one kilogram of gold is \$1500. All unused e-waste materials go to landfill.

25 *ABC* employs highly trained technicians to operate the machines in its factory. Computerized manufacturing technology quickly identifies any problems. Technicians must be flexible and adaptable, as machine breakdowns stop the entire process—last month, one such breakdown caused the factory to close for two days. *ABC*'s technicians are paid a salary, are included in employee share ownership schemes, and receive fringe payments. Technicians' morale is high, but they have complained about excessive noise from the machines and potential dangers to health from the toxic metals.

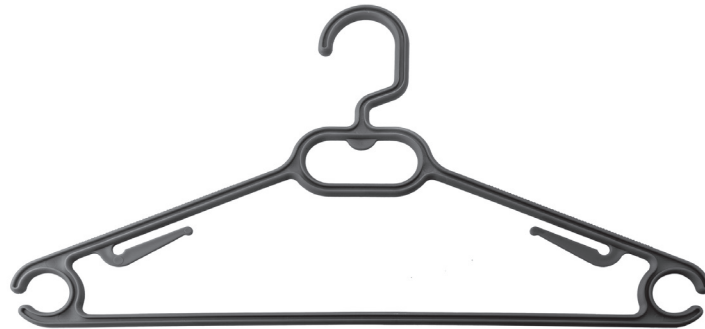
30 The gold extracted from e-waste creates small nuggets (similar to small stones). In 2025, *ABC* updated its website to include an online market to advertise and sell gold. *ABC*'s marketing director believes that selling recycled gold will provide a unique selling point/proposition (USP). *ABC* is collaborating with an environmentally sustainable business (business-to-business [B2B]) to make coins and gold bars stamped with the *ABC* logo. These are sold using a premium pricing method
35 and are numbered and presented in unique packaging that highlights the recycled nature of the gold.

ABC has profited greatly from recycling gold from e-waste. However, technology in electronics changes rapidly, and *ABC* expects that the process will need costly updates every three to five years.

40 Recently, a social media post highlighted the impact of plastic waste in landfills and named *ABC* as a major contributor. *ABC*'s board of directors took the accusations very seriously.

In response, *ABC* identified an opportunity to add a new plastic-melting machine capable of melting the plastic waste into clothes hangers (**Figure 1**). The clothes hangers would be priced at \$0.50 each. *ABC*'s production manager forecasted production of 3 000 000 clothes hangers per month.

Figure 1: The clothes hangers produced by *ABC*



ABC's monthly costs associated with the new plastic-melting machine are shown in **Table 1**.

Table 1: Monthly costs associated with the new plastic-melting machine

Variable costs	\$0.30 per hanger
Fixed costs	\$500 000

For the new plastic-melting machine to work, *ABC* would have to reorganize its factory space. This reorganization would require all production to stop for 30 days. The production manager believes that all e-waste could be stored with no environmental impact during the reorganization period. However, some external stakeholders are worried about the impact of the storage of e-waste. Meanwhile, the marketing director is concerned about the impact this reorganization would have on gold sales and brand loyalty. *ABC* would also need to hire additional technicians, potentially disrupting the current positive work environment.

In 2025, *Banksmart*, a large banking corporation, approached *ABC* about its e-waste recycling process and corporate social responsibility (CSR) objectives. *Banksmart* has 400 offices (branches) across three countries. A strategic alliance was discussed.

Banksmart needs to update its technology, including its computers, every three years to remain current, but not all of the bank's offices update at the same time. E-waste associated with these upgrades is expensive and time-consuming, and the e-waste always ends up in landfills. *Banksmart*'s board of directors is hoping that a strategic alliance with *ABC* will improve its brand value and attract new, environmentally conscious customers. As part of the agreement, *ABC* would have a yearly collection of e-waste from *Banksmart* and transport it back to the *ABC* factory for recycling. *ABC* would need an initial investment of \$4 000 000 for extra storage and a second plastic-shredding machine. The strategic alliance is forecasted to generate \$500 000 a year, based on the price of gold.

As part of the strategic alliance, *ABC* would keep all profits associated with the recycling of the e-waste but would need to:

- erase (remove) all confidential *Banksmart* data and software from the computers
- identify computers and any computer parts that can be reused and sold.

- 70 To manage the erasing of data and software from computers and the identification of computers and parts for reuse and sale, *ABC* would need additional part-time employees to sort through *Banksmart's* e-waste. These employees would be provided with on-the-job training from existing technicians. The factory workspace would also need to be reorganized, which would stop production for 20 days.
- 75 *ABC's* board of directors are excited by the prospect of increased profits associated with the strategic alliance. The human resources (HR) manager, however, is concerned about the impact on the motivation of existing technicians, while the production manager is concerned about potential delays.

Section A

Answer **all** questions from this section.

1. Define the term *employee share ownership scheme*. [2]
2. State **two** types of direct costs. [2]
3. Describe **one** of *ABC*'s internal stakeholders **and one** of *ABC*'s external stakeholders. [4]
4. Explain **two** benefits for *ABC* of having a unique selling point/proposition (USP) (lines 31–32). [6]
5. Explain **one** advantage **and one** disadvantage for *ABC* of using mass/flow production (line 19). [6]

Section B

Answer **one** question from this section.

6. Discuss whether *ABC* should invest in the new plastic-melting machinery to create clothes hangers. [10]
 7. Discuss whether *ABC* should form a strategic alliance with *Banksmart*. [10]
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References:

- Figure 1** Marzovillo, F., 2025. *Multifunctional blue plastic coathanger - stock photo*. [image online] Available at: <https://www.gettyimages.co.uk/detail/photo/multifunctional-blue-plastic-coathanger-royalty-free-image/2198591001> [Accessed 27 May 2025]. Source adapted.