

## Singapore CA Qualification Examination

**9 December 2025**

### **Business Value, Governance & Risk**

#### **INSTRUCTIONS TO CANDIDATES:**

1. The time allowed for this examination paper is **3 hours 15 minutes**.
2. This examination paper has **FOUR (4)** questions and comprises **NINETEEN (19)** pages (including this instruction sheet). Each question may have **MULTIPLE** parts and **ALL** questions are examinable.
3. This is an open-book examination. During the examination, you are allowed to use your laptop and any calculators that comply with the ISCA's regulations. Please note that smartwatches, mobile phones, tablets, and all other electronic devices **MUST NOT** be used during the examination.
4. During the examination, videos of you and your computer screen will be recorded for the purpose of ensuring examination integrity and you have consented to these recordings.
5. This examination paper and all video recordings of this exam are the property of the Accounting and Corporate Regulatory Authority.
6. Only answers in English are accepted.

#### **MODULE-SPECIFIC INSTRUCTIONS:**

7. This case is hypothetical and has been written exclusively for the purpose of this examination. Names, characters, places and incidents used are imaginary or fictional. Any resemblance to actual events or locales or persons, living or dead, is entirely coincidental. This case is not to be cited without the permission of the Accounting and Corporate Regulatory Authority.

#### **IMPORTANT NOTICE:**

**If you are not feeling well, please do not press "Start Assessment". If you have started and leave during the exam, you would be deemed to have attempted the paper.**

**\*\*VERY IMPORTANT NOTICE\*\***

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1. Your question paper is attached under the "**Resource**" tab found at the bottom right of **EACH** question.
2. You may also download the question paper that allows annotation throughout your exam in Question 1 of the e-Exam portal.

**Other important information:**

3. You will be allowed to access your reference materials but **will not be allowed** to communicate with anyone either physically or through any electronic means.
4. You are **NOT ALLOWED** to access any websites during the exam.
5. You are **NOT ALLOWED** to print the question paper.
6. **Please take note that your screen will be monitored throughout the examination. If you are found to have accessed unauthorised materials or websites, or if you cheat or attempt to cheat, you will be liable to severe disciplinary action.**

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7. **You do not need to fill in an answer to this instruction question.**

### **Question 1 – (a), (b) and (c)**

EnviroTech Solutions Pte. Ltd ("EnviroTech") is a significant player in the environmental technology sector, focusing on innovative waste management and recycling solutions. Based in Singapore, EnviroTech serves a wide array of markets, including India, China, and other countries across South-East Asia. EnviroTech's mission aligns closely with global Sustainable Development Goals (SDGs), particularly in areas such as responsible consumption and production (SDG 12) and affordable and clean energy (SDG 7).

EnviroTech's listing on the Catalist Board of the Singapore Stock Exchange three years ago has been instrumental in boosting their capacity for innovation and global expansion.

EnviroTech provides a range of advanced waste management technologies designed to help both municipalities and corporations minimise landfill dependency, optimise resource recovery, and generate renewable energy from waste.

EnviroTech's continued investment in research and development (R&D) positions the company to rapidly adapt to market and regulatory change and consumer requirements.

#### **Environmental services industry**

The environmental services industry plays a crucial role in addressing the world's most pressing environmental challenges, particularly those related to resource depletion, waste management, and climate change. EnviroTech's technologies help reduce the environmental burden of waste through improved waste diversion rates and reduced greenhouse gas emissions.

By converting waste into energy, EnviroTech supports the global shift towards renewable energy sources, reducing reliance on non-renewable energy and aligning with global climate goals. Their consultancy services also help businesses meet regulatory requirements and enhance their Environmental, Social, and Governance

(ESG) performance, promoting corporate sustainability and compliance with international standards such as ISO 14001 (Environmental Management Systems).

## **EnviroTech services**

EnviroTech's services include:

1. **Recycling sorting systems:** EnviroTech offers customisable sorting solutions that automate the separation of recyclable materials from general waste streams. These systems improve efficiency and reduce contamination in recycling processes, contributing to higher recovery rates of materials like plastics, metals, and paper.
2. **Waste-to-Energy plants:** These plants convert non-recyclable waste into usable energy, such as electricity, heat, or even fuel, utilising advanced technologies like combustion, gasification, and anaerobic digestion. The energy generated reduces reliance on fossil fuels, promoting cleaner energy alternatives while addressing waste disposal challenges.
3. **Automated recycling facilities:** Designed for various industries, these facilities use advanced mechanical, chemical, and biological recycling techniques to recover valuable materials from waste streams. This enables clients to improve their sustainability metrics and reduce the environmental impact of their operations.
4. **Environmental consultancy services:** Complementing its technological offerings, EnviroTech provides consultancy services that include waste management audits, environmental impact assessments, and sustainability strategy development. By leveraging deep industry knowledge and expertise, EnviroTech helps clients navigate complex environmental regulations, develop sustainable waste management practices, and set and achieve their sustainability goals.

## **Current risk management practice at EnviroTech**

EnviroTech has witnessed a remarkable phase of growth over the past few years, bolstering its presence not just in Singapore but also in key markets like India and China. Amidst this rapid expansion and the pursuit of new business opportunities, the governance of risk management at EnviroTech has not received the attention it critically needs.

The Board and senior management have historically engaged in ad hoc discussions regarding risk, without the support of a dedicated risk committee or more formalised risk management processes. Moreover, EnviroTech operates without any established risk management systems.

Whilst this approach to risk management has become a norm, the Board now recognised that as EnviroTech's operations have grown in complexity and its exposure to global and operational risks has increased, then it is time to improve risk management at EnviroTech.

To start this process, the following email was sent by EnviroTech's Chief Operating Officer to the Board of EnviroTech.

Dear Fellow Board Members,

As you all know, the past few years have been a period of growth, and both the Board and senior management have been entirely focused on seeking potential business opportunities and managing ongoing operational challenges. It is now time for our organisations to refocus on risk management.

To restart this process, my operations team and I have identified the following top five risks that demand our immediate attention and strategic intervention.

## **1. Changing external market for environmental waste solutions**

The environmental technology landscape is continuously reshaped by the introduction of new customer products, shifting preferences of consumer products and regulations.

## **2. Envirotech technological obsolescence**

The emergence of new groundbreaking environmental waste technologies could potentially render EnviroTech's current offerings less competitive or technologically obsolete.

## **3. Supply chain vulnerabilities**

Our global supply chain is the backbone of our operations. Yet, it is fraught with potential disruptions arising from geopolitical tensions, pandemics, and environmental catastrophes.

## **4. Currency fluctuations**

Operating on an international scale exposes EnviroTech to exchange rate fluctuations and could significantly affect our revenues and costs. However, our finance team's hedging strategies and currency risk management processes help mitigate these potential impacts.

## **5. Data security and privacy**

In an era where our operations increasingly rely on digital technologies, the security of sensitive customer and supplier information is paramount, and the risk of a data breach must be better understood at EnviroTech. EnviroTech has recently responded with a substantial investment in cybersecurity prevention software which is now operating.

As a next step, I propose we conduct a process to revisit risk evaluation and consider new risk mitigation strategies which can then be implemented.

Best wishes,

Ben Watts, Chief Operating Officer

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**Question 1 required:**

**2**

**(a)** Explain **FOUR** consequences of EnviroTech's current approach to risk management.

**(4 marks)**

**3**

**(b)** Recommend **FIVE** improvements which will strengthen risk management at EnviroTech. For each recommendation, explain its benefit to EnviroTech.

**(10 marks)**

**4**

**(c)** Evaluate each of the **FIVE** risks identified in the email sent by the Chief Operating Officer to the Board of EnviroTech, by applying the following criteria:

- (i) Likelihood (High or Low); and
- (ii) Impact (High or Low).

**(10 marks)**

**(Total: 24 marks)**

## **Question 2 – (a) to (f)**

### **CleanPack Innovations Limited**

CleanPack Innovations Pte. Ltd. ("CleanPack") is a wholly owned subsidiary of EnviroTech which operates in a complementary segment of the sustainability market by tackling the global plastic pollution crisis by specialising in biodegradable packaging solutions,

CleanPack designs and manufactures products such as biodegradable bags, food containers, and protective packaging materials from renewable resources like cornstarch and cellulose. These products offer eco-friendly alternatives to conventional plastic packaging, aligning with the growing consumer demand for sustainable products.

CleanPack's innovative products are designed to break down naturally without leaving harmful residues, reducing plastic waste in landfills and oceans. These solutions are essential in combating the widespread plastic pollution that threatens marine ecosystems and terrestrial habitats.

CleanPack heavily invests in R&D to develop biodegradable materials that offer the same performance, durability, and cost-effectiveness as traditional plastics. This focus on innovation ensures that businesses can adopt sustainable packaging without compromising on product quality or cost-efficiency.

CleanPack employs targeted marketing strategies to raise awareness among consumers and businesses about the importance of switching to biodegradable packaging. Their campaigns focus on educating the public on the environmental impact of plastic waste and the benefits of using sustainable alternatives, supporting a broader cultural shift towards eco-friendly consumer behaviour.

Over the past three years, CleanPack Innovations has demonstrated consistent year-on-year improvement in its financial performance. This growth can be attributed to increased demand for sustainable packaging solutions, successful entry into new markets, and operational efficiencies gained through innovations in materials science

and production processes. CleanPack has managed to carve out a significant niche in the biodegradable packaging market, contributing positively to EnviroTech's overall financial health.

CleanPack Innovations offers a wide range of products, including biodegradable containers, cutlery, and wrapping materials, designed to decompose within a short period after use. These products cater to the food and beverage industry, retail, and e-commerce sectors, with significant market presence in India, China, and other Southeast Asian countries. The innovation in product design and the use of sustainable materials have set CleanPack apart in a competitive market.

Recent financial results of CleanPack are as follows:

<b>Statement of Profit for the year ended 30 September 2025</b>	
	<b>S\$m</b>
Revenue	68.3
Raw materials and other consumables	(18.0)
Personnel costs	(6.1)
Depreciation	(17.6)
Energy, maintenance, repairs, and other production overheads	(6.0)
Other operating expenses	(3.0)
Finance costs (4%)	(2.0)
<b>Profit before tax</b>	<b>15.6</b>
Tax at 17%	(2.7)
<b>Profit for the year</b>	<b>12.9</b>
Dividends	(3.9)
<b>Retained profit</b>	<b>9.1</b>

<b>Statement of Financial Position as at 30 September 2025</b>	
	<b>S\$m</b>
Property, fixtures, fittings, and equipment	125.6
<b>Non-current assets</b>	<b>125.6</b>
Inventories	3.9

<b>Statement of Profit for the year ended 30 September 2025</b>	
Trade and other receivables	10.6
Cash and cash equivalents	5.1
<b>Current assets</b>	<b>19.6</b>
<b>Total assets</b>	<b>145.2</b>
<b>Equity</b>	
Share capital	1.0
Retained earnings	78.6
<b>Total Equity</b>	<b>79.6</b>
<b>Liabilities</b>	
Trade and other payables	15.6
Loans and borrowings	10.0
<b>Current liabilities</b>	<b>25.6</b>
Loans and borrowings	40.0
<b>Total liabilities</b>	<b>65.6</b>
<b>Total Liabilities &amp; Equity</b>	<b>145.2</b>

### **Potential divestment of CleanPack**

The decision to consider divesting CleanPack Innovations stems from a strategic realignment and the need to concentrate capital and resources on expanding EnviroTech's core business of waste management technology and services. The divergence of CleanPack's manufacturing and material science focus from EnviroTech's service-oriented model has prompted this consideration, alongside the desire to capitalise on CleanPack's market success to fund further technological advancements and market expansion in waste management solutions.

The Board has requested the following equity valuations for CleanPack to assist with divestment negotiations by applying the additional information included below.

1. Net assets valuation at (i) book value and at (ii) realisable value;
2. Dividend valuation;
3. Market approach by applying an average market earnings ratio to 30 September 2025 profit after tax; and
4. Free cash flow valuation.

### **Additional information**

For the realisable net asset value, the Directors have estimated the realisable value of each class of asset as follows:

<b>Class of Asset</b>	<b>Realisable value as % of book value</b>
Property, Fixtures and Fittings, Equipment	85%
Inventories	80%
Trade and other receivables	90%

- The Directors have determined that the dividend valuation should be based on the dividend at 30 September 2025 and expected dividend growth into perpetuity of 5% per annum.
- The directors have estimated that the value of the “CleanPack” brand, in addition to other assets, is in the region of S\$25 million.
- The currently quoted price-earnings multiple of EnviroTech is 10.43. The Directors also believe a downward adjustment of 30% to the quoted market multiple of EnviroTech is suitable, as CleanPack is being sold as a small, unlisted company.
- The free cash flow to the firm valuation is to be based on forecast profit after tax, which is expected to grow at 5% per annum for the next four years, and the 2% per annum for each year thereafter. When calculating the free cash flow to the firm, the Directors have advised to assume forecast annual depreciation charge

is a good estimate for annual capital expenditure. Additionally, assume there are no year-on-year changes in working capital.

- The beta of a similar Singapore-listed company which specialises in biodegradable packaging is 2.77. This proxy company is 1:2 geared (measured as debt: equity). The Directors of EnviroTech believe this proxy company provides an appropriate equity beta, which can be used to determine a risk-adjusted weighted average cost of capital for EnviroTech to value the divestment of CleanPack.
- The Directors estimate the current market capitalisation of EnviroTech to be S\$6,000 million.
- EnviroTech currently has S\$2,000 million of outstanding debt in issue in the form of corporate bonds, which are trading at par. The average maturity of EnviroTech corporate bonds is 10 years.
- EnviroTech currently has an 'AA' credit rating, and the quoted credit spread for AA corporate bonds is as follows.

Rating	1 year	2 years	3 years	5 years	7 years	10 years	20 years
AA	34	43	49	61	69	81	109

**Note:** The table of yields above is quoted in basis points where 1% = 100 basis points.

- The current yield on 10-year Singapore government bonds is 2.75%, which the directors estimate approximates to the risk-free rate of investment in Singapore.
- The current market return on the Singapore equity market portfolio is 7.25%, and the corporate tax rate in Singapore is expected to remain at 17% in the future.
- For the dividend valuation of CleanPack, EnviroTech's cost of equity ( $K_e$ ) should be applied.
- For the free cash flow valuation of CleanPack, EnviroTech's weighted average cost of capital (WACC) should be applied and assume the EnviroTech's debt value and interest rate remain unchanged into perpetuity.

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**Question 2 required:**

- 5** (a) Evaluate **TWO** pros and **TWO** cons of divesting CleanPack.  
**(4 marks)**
- 6** (b) Determine a suitable cost of equity ( $K_e\%$ ) and weighted average cost of capital (WACC) of EnviroTech for purpose of valuing CleanPack.  
**(5 marks)**
- 7** (c) Using the **FOUR** methods of valuation requested by the Board of EnviroTech, provide a summary of the range of possible valuations of CleanPack.  
**(14 marks)**
- Note:** Candidates are required to use year-end discount factors, where applicable. Candidates should present their answers in millions of Singapore dollars quoted to one decimal point.
- 8** (d) Interpret the valuation results from part (c) and recommend, with justification, an appropriate starting price for negotiating the sale of CleanPack  
**(3 marks)**
- 9** (e) Explain **THREE** reasons why a potential purchaser of CleanPack may be prepared to pay more for EnviroTech than the price suggested in part (d).  
**(3 marks)**
- 10** (f) Explain **THREE** reasons why a potential purchaser of CleanPack may offer less than the price suggested in part (d).  
**(3 marks)**
- (Total: 32 marks)**

### **Question 3 – (a), (b) and (c)**

#### **Purchase of new production machinery at EnviroTech**

EnviroTech Solutions is looking to significantly upgrade its production and machinery to adopt more advanced waste processing technologies, aiming to enhance efficiency and expand its service capacity and address a requirement to expand short-term production capacity. The Directors have identified a potential China-based manufacturer and supplier, which can manufacture bespoke designed production machinery, and deliver and install it within a six month timeframe.

EnviroTech's production director has visited the Chinese supplier and was satisfied with the specifications and quality of the manufacturing equipment this company can supply to boost EnviroTech's production capacity.

The next step for the Board is to consider financing options. EnviroTech can purchase the production machinery outright with a 5% discount on the purchase price or lease the production machinery from the manufacturer under the following terms.

#### **Option 1: Purchase**

The new production machinery can be purchased for CNY10.5 million and is expected to have a disposal value of CNY2.5 million at the end of five years, which is when the unit is expected to be replaced. The purchase cost includes all delivery and installation costs and is guaranteed for all breakdowns and repairs by the manufacturer in the first year of use.

After the first year, EnviroTech will be responsible for all repair, service and maintenance costs, which the Directors have forecast to be S\$50,000 per annum (at current prices), with an inflation of 2% per annum for the production machinery remaining useful economic life. If EnviroTech can pay for all production machinery at the point of order, then the supplier will provide a 5% discount on the agreed purchase price.

## **Option 2: Lease**

The new production machinery can be leased for five years at an annual fixed cost of CNY2.5 million payable annually in arrears. The manufacturer will include delivery from China, installation at EnviroTech's manufacturing production, all repairs and maintenance services for the entire term of the five-year lease agreement.

## **Other information**

The current exchange rate between Chinese Yuan and the Singapore dollar is CNY5.5 per S\$1.

The interest rate in Singapore is currently 3.5% per annum, and the interest rate in China is 4.0% per annum.

The Directors are unsure whether it would be beneficial for EnviroTech to buy the new production machinery outright or lease the new production machinery from the supplier.

The Directors have assumed that EnviroTech can claim capital allowances on a 20% reducing balance basis. As EnviroTech is profitable, it expects to pay tax on profits at the annual corporate rate of 17%. For simplicity, the Directors assume tax is payable in the period it arises.

EnviroTech has an existing bank loan on which it pays interest at an after-tax rate of 6.0% per annum, which the Directors' advice is to be used to analyse the lease option and the purchase option.

If the buy decision is chosen, then EnviroTech will need to arrange additional financing. The Directors have not yet approached EnviroTech's bank to arrange additional loan financing and are also considering offering a new corporate bond to investors.



## **Question 4 – (a) and (b)**

### **Internal Audit Report: Governance Review at EnviroTech Solutions Ltd.**

This report presents the findings of an internal audit conducted to evaluate the governance practices at EnviroTech.

The audit focused on the current state of governance concerning the Board of Directors, Audit Committee, Nomination Committee, and Remuneration Committee. Additionally, shareholder communication effectiveness was reviewed.

This review has identified several areas where EnviroTech's governance practices could be improved to align with best practices and regulatory requirements. The key findings are set out below.

#### **Key findings**

EnviroTech's Main Board of Directors is comprised of five executive members, including the CEO, alongside six independent, non-executive directors (INEDs). This balance was disrupted following the resignation of three INEDs two months ago, and replacements have yet to be appointed.

Additionally, the attendance of both executive and non-executive directors at scheduled Board and committee meetings has been inconsistent, resulting in several postponements or cancellations. This issue is compounded by the deferral of the Board of directors' performance review for a third consecutive year, which raises concerns about the Board's commitment to self-initiated evaluation and accountability.

Although the Audit Committee comprises of three INED's ( Audit Committee has not convened since May 2025. Also, a critical meeting between the Audit Committee and EnviroTech's external auditors to discuss the latest year-end audit results was postponed and has not yet been rescheduled. This means the 30 September 2025 annual report has been delayed and it is unknown when this will be released to the

market and our investors. As required, EnviroTech's Internal Audit team report directly to the Audit Committee.

Due to recent resignations, the Audit Committee has lost one INED. There is a proposal on the table for the current external audit partner, who is expected to resign this year, to be appointed as a new non-executive director and lead the Audit Committee.

The Nomination Committee's processes also come under scrutiny due to the slow pace of initiating the nomination process for replacing the three resigned INEDs, which remain unappointed.

The Remuneration Committee faces its own set of issues, primarily because it is led by the CEO. This arrangement is controversial as the CEO is in a position to evaluate the performance of executive directors and set their pay levels, potentially leading to conflicts of interest. This situation is exacerbated by the CEO's decision to override a Board resolution that called for the disclosure of individual directors' remuneration in the 2024 Annual Report, citing commercial sensitivity and thereby compromising transparency.

Furthermore, a significant concern has been raised by a large institutional shareholder regarding the availability of only outdated investor information on EnviroTech's website, indicating a gap in effective communication and transparency with shareholders.

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**Question 4 required:**

**14**

**(a)** Explain **TWO** reasons how each body listed below contributes to good governance at EnviroTech.

- (i) Board of Directors
- (ii) Remuneration Committee,
- (iii) Audit Committee, and
- (iv) Nomination Committee

**(8 marks)**

**15**

**(b)**

**(i)** Identify and explain **SIX** instances of poor governance or non-compliance with Singapore Code of Corporate Governance at EnviroTech concerning the Main Board of Directors, the Audit Committee, the Nomination Committee, and the Remuneration Committee.

**(ii)** For each instance identified in part (i), make a recommendation for improvement in EnviroTech's Corporate Governance framework.

**(12 marks)**

**Note to Candidates:** There is no requirement to state references to principles or provisions taken from the Singapore Code of Corporate Governance.

**(Total: 20 marks)**

**END OF PAPER**