PAPER 3 **120 marks**

Ignore value-added tax (VAT), unless otherwise stated.

1 Background

TransT Ltd ('TT') is a transport and logistics company that is listed on the Johannesburg Stock Exchange (JSE). TT began business in 1962 in South Africa and has since grown to one of Southern Africa's most recognised brands in the industry. TT is focused on providing innovative, safe, efficient and cost-effective logistics services to their customers, including farmers. They have specialised and tailored offerings for logistics services that cover their customers' entire value chain.

TT prepares its annual financial statements in accordance with IFRS® Accounting Standards (IFRS) and has a 30 June financial year end.

The TT business model is based on tailoring machinery to various industries such as agriculture, mining, fuel, chemicals, and fast-moving consumer goods. These types of machinery require significant capital outlay and are subject to rapid technological enhancements, which means that customers, in particular farmers, must continually invest to remain up to date on new technological developments. TT removes this burden by providing the most recent transport technologies as a service. One of its product offerings is a lease service, in which it provides the necessary equipment and expertise to deliver the service required by its customers.

2 Farming and agricultural support services

One of the biggest sectors and most lucrative industries that TT serves is the agriculture industry. TT has a comprehensive offering that includes machinery for preparation of soil, planting of crops, watering and applying insecticides and plant nutrients, harvesting, and delivery to market. The crop-spraying division, called 'SprayT', which uses planes for large-scale crop spraying, has been trading for years and been doing well due to a large demand for this service from farmers over the last few years.

Most farmers do not have the capital or expertise to own crop-spraying planes and hire pilots to operate the planes. They also lack the resources to keep these planes updated with new technologies and rely on TT to perform this function.

TT has an exclusive, on-going contract with AgriValSpec (Pty) Ltd ('AgriValSpec'), a valuation specialist company. Determining accurate valuations is crucial when selling or procuring assets in the agricultural industry, including risk management and tax planning. AgriValSpec's services include the following:

- Estimates of fair values of all TT's agricultural and related assets to assist with –
  - implicit interest rate calculations surrounding leases,
  - residual values, and
  - fair values of assets TT intends to sell, or whenever the need for fair value estimation arises.
- Annual year-end fair value estimates of planes owned by the SprayT division.

3 Agricultural drone fleet proposal – Project Drone

TT's operations director, Denzil Arumugam, has long been interested in the use of drone technology in the agricultural sector. Until now, the limits of batteries and load size have meant that drone crop spraying has not been viable for large farms. However, the larger drones, with fewer limitations on batteries and larger payload[1] size, that are now available could be used effectively in crop spraying. He therefore suggested that SprayT invest in drone technology as the use of agricultural drones is essential for the division's overall sustainability and relevance.

If TT decided to purchase drones, it would have to employ registered drone pilots. Agricultural drones have amongst others, the following advantages over planes:

- They use batteries instead of fuel and can spray at night, thus allowing for 24/7 spraying operations.
- Drones achieve greater penetration through the crop canopy[2]. This is a significant improvement compared to aerial spraying, as it consumes less water and ensures that chemicals go precisely where they are needed, rather than uniformly across an entire field.
- Drones achieve significant crop yield benefits for customers. Research indicates noticeable improvements in crop growth speed and yield of crops, based on the drones' ability to collect vast amounts of data, which enables farmers to boost productivity while reducing costs, human error and environmental damage.
- They collect real-time data. Thus, action can immediately be taken when environmental problems such as pest outbreaks occur, limiting crop losses.
- Costs are saved because the licencing and skills required for drone pilots are significantly lower than for plane pilots.
- Each drone pilot can operate two drones at a time.
- Drones offer economic empowerment as local personnel can be upskilled to become drone pilots.
- Drone pilots have a commercial remote pilot licence and are also registered as a pest control operator.
- Drones can be used to survey and map all potential spray routes based on crop health, creating intelligent optimal applications.

Denzil proposed a test project to use drones on the large farm of one of TT's customers in the Free State. For this, TT would need to purchase a fleet of eight model XJI-S30 Agra drones ('Agra drones') from a Chinese supplier, ZAGG Advanced Agri Solutions ('ZAGG'). ZAGG developed this drone model at a cost of over R40 million and it is set to become a game-changer for the agricultural industry. The test project would serve to assess the viability of using drones in SprayT.

The Agra drones are the best option because they are environmentally friendly and have a relatively low operating cost. They have a proven track record of reliability and precision in the Chinese market, where they exceeded expectations in spraying precision as well as optimal chemical utilisation. Denzil noted that they would reduce operating costs and in addition it would be possible to tailor each drone to the specific needs of each type of crop.

TT commenced discussions with ZAGG during August 2023, the aim being to purchase the drones in January 2024 should the board decide to go ahead with the investment.

[1] Payload means the amount of chemicals that can be carried at a time.
[2] A crop canopy is a layer of branches, stems or leaves that spread out at the top of trees or plants.

The details relating to the purchase would be as follows:

Drones (excluding batteries)	Cost price of each drone	R220 000
	Depreciation period	5 years
	Wear and tear allowance in terms of the Income Tax Act	4 years
	Period of operation	5 years
	Replacement	At the end of 5 years
	Resale value at the end of the 5 years	R72 000
Batteries	Number of batteries	3 per drone
	Cost price per battery	R40 000
	Drone batteries can power the drone for approximately 12 minutes on average before having to be changed, and it takes approximately 20 minutes to recharge a battery. Each drone will therefore require two spare batteries to ensure continuous flying time. This will ensure that the two spare batteries are charged while the drone flies and are available for replacement to keep the drone in operation. Exchanging of batteries does not take much time and need not be taken into consideration.	
	Depreciation of batteries, based on the expected useful life of each battery	5 years
	Resale value: sold for recycling	70% of their original cost
Solar charging station for charging batteries	Cost price per station One station is required for every drone	R50 000
	These will be used in the production of renewable energy and qualify for a deduction of 125% in terms of the Income Tax Act	
	It should not require replacement and thus will not be sold	
Resale value of solar charging station if it were sold	Estimated market value, per station after five years	R40 000

The operating details are as follows:

Spray surface per drone	125 hectares per hour
Operating period per drone	20 hours per day 48 weeks per annum (drones will not be used during weekends and holiday periods)
Downtime due to adverse weather conditions during the 48-week operating period per annum	8 weeks
Drone pilots	Each pilot can operate 2 drones at the same time
Shift length (operating hours)	10 hours
Variable cost of a drone for maintenance and spares, and pesticides	R150 per hectare
Market-related salary for a drone pilot	R168 000 per annum

All drones will be used and operated at maximum capacity. The drone operation will need four specialised aviation ground vehicles to carry all the equipment and needs to be able to travel over rugged territory. TT has four such vehicles, which are used for the deployment of crop-spraying planes. These were originally intended for disposal but if the drones are brought into operation, it would be possible to repurpose the vehicles for the drone operation.

The vehicles were originally purchased for R780 000 each and have a current tax value of R390 000 each. The replacement cost of a new vehicle is R825 000, and each vehicle can be sold for its fair value of R450 000. The vehicles qualified for a four-year wear and tear tax allowance and will have a residual value of R300 000 each at the end of the five-year project. The vehicles were damaged recently in a hailstorm, and if repaired they can be sold for a revised fair value of R475 000 each. The repair cost would be R12 000 per vehicle.

TT has determined that it can charge R170 per hectare for pesticide spraying.

All the operating costs and revenues provided would be the expected amounts for the first year of running the drones. The company anticipates that all costs and revenues will escalate at an inflation rate of 6% per annum from the second year of the forecast period.

To fund the investment in the new drones, the company intends to sell some of its planes, which will no longer be required due to decreased demand for crop spraying by plane. The fair value of similar planes in a similar condition is R3,2 million each. The planes in aggregate currently have a tax value of R4 million. These planes would have attracted a wear and tear allowance of R2 million in each of the next two years. TT's lawyers charge a standard fee of R1 500 per sales contract it draws up.

The company evaluates new projects using the IRR[3] measure. This will be compared to the discount rate of the company of 13,5%, plus a 5% premium. The additional 5% premium is a historical practice for the company.

3.1 WACC[4] considerations for Project Drone

The board of directors wanted to evaluate the project before the financing decision, using the existing capital structure. It requested that the management accounts for November 2023, which are stated at book value, be used to calculate an appropriate WACC. The company generally considers the market value of the funding instruments to be a good proxy for its optimal capital structure.

Extract from the management accounts for 30 November 2023	**Notes**	**Amount**
		R'000
Ordinary share capital and premium	3.1.1	12 000
Distributable reserves		26 326
Interest-bearing loans	3.1.2	50 000
Deferred taxation		8 624
Minority interest	3.1.3	3 528

Notes

3.1.1 The company has ten million shares in issue. The shares are currently trading at R8,45 per share. The company has a levered beta of 1,4.

[3] IRR = internal rate of return.
[4] WACC = weighted average cost of capital.

3.1.2 Interest-bearing loans have a weighted average fixed interest rate of 9% per annum. The current weighted average market interest rate for these loans is 11,5%. The loans are redeemable at par in five years' time.

3.1.3 The minority interest relates to a company in which TT holds an interest. This company's risk profile is similar to that of TT. The company has not been valued separately.

3.2 Purchase and funding of the drones

The board of directors approved Project Drone and planned to fund the project with the cash on hand and proceeds from the sale of old planes. However, it needed to raise a further R14 million in debt. In December 2023, an agreement for a loan was concluded with BuzzFin Ltd ('BuzzFin'), a specialist business financier.

The terms of the loan were as follows:

- A R14 million secured loan, advanced on 1 January 2024.
- An initial 0,25% transaction fee on the loan principal was paid upfront.
- The loan is repayable in instalments of R995 000, payable every six months in arrears over a period of eight years, with the first instalment payable on 30 June 2024.
- At the end of the eight-year period 30% of the loan principal will be outstanding. BuzzFin has the option to convert the outstanding balance to a variable number of shares in TT, to allow BuzzFin to obtain a 2% shareholding in TT.
- The nominal interest rate of a similar business loan with a conversion option is quoted at 11,67% per annum (compounded every six months), which is a prime rate of 8,75% plus 2,92% per annum adjusted for the company risk.

The accountant processed the following journal entries to account for the loan:

	Dr.	**Cr.**
	R	**R**
1 January 2024		
Bank (SoFP)	13 965 000	
Loan liability (SoFP)		11 865 335
Equity (SCE)		2 099 665
Pmt = R995 000; n = 16; FV = R4 200 000; i = 11,67 Comp PV		
Recognition of a compound financial instrument		
30 June 2024		
Interest on loan (P/L) (1 AMRT INT)	692 342	
Loan liability (SoFP)	302 658	
Bank (SoFP)		995 000
Allocation of payment to interest and the loan		

4 Latest developments

The TT board decided on a phased roll-out investment in drones. Thus, the company would initially only invest in 30 drones: ten each to be used in the North-West, Free State and Eastern Cape provinces. On 23 January 2024, TT entered into an agreement with ZAGG for the purchase of Agra drones. The purchase agreement included the following terms:

Terms	**Amount**	**Conversion at spot rate on 12/02/2024**
	CNY[5]	**ZAR**
Cost per drone	85 600	220 200
Standard shipment and delivery (14 days shipped, cost insurance freight)	500	1 285
Two-year warranty on drone hardware		
100% fee payable before shipment		

The cost per drone includes assembly costs. On 26 January 2024, TT paid a total amount of R6 686 800 for the drones, excluding shipment and delivery. The drones were shipped on 29 January 2024 and arrived at the Durban port on 12 February 2024. Customs (import) duty of 20% was levied on the market value of each drone. The drones arrived at the main TT warehouse in Johannesburg on 15 February 2024. ZAGG sent out South African specialist contractors to assemble the drones at the TT warehouse on 15 February 2024. The drones were then distributed to the respective TT warehouses located in the three provinces at a total cost of R45 000 (including VAT).

All the drones were brought into use on 1 March 2024 at the agricultural land of farmers who entered into two-year rental contracts with TT. The rental fee is variable and depends on the total hectares of crop sprayed and monitored by the Agra drones. The amount includes the drone pilot fee. The rental transactions have been accounted for as an operating lease in terms of IFRS 16 *Leases*.

The Free State was hit by a severe storm on 3 May 2024. During the storm, the roof of the Bethlehem warehouse was ripped off and the crop-spraying drones were significantly damaged. ZAGG has the necessary expertise to repair the drones. All TT assets are appropriately insured.

Management had two options, namely either to repair the damaged drones or purchase new drones. They contacted ZAGG early in June 2024 for a repair quote, but ZAGG advised TT against the repair work on the Agra drones. The cost of repair of CNY30 000 (roughly R90 000) per drone would outweigh the benefit, since ZAGG would be introducing an Agra 2.0 drone model late in June 2024. This new drone would include the latest and most advanced agricultural drone software. The market value of the original Agra drone would drop by an estimated 45% once the new model was introduced.

At the last board meeting of the year, management intensely discussed the matter to select the most appropriate option and requested (and subsequently received) the following:

- An estimate for the fair values of all the drones from AgriValSpec; and
- An estimated value-in-use of the drones at 30 June 2024 from management.

[5] CNY = Chinese Yuan.

5 Senior management incentive scheme

On 1 December 2023, TT granted 10 000 share options each to 16 of its senior managers to purchase shares at R6,50 each. These share options are to be exercised on or after 30 November 2026, on condition that the senior manager is still employed and that the share price is trading at more than R10 per share over the vesting period. At grant date, TT did not expect any director to leave employment and expected the share price to be above R10 over the vesting period.

On 30 June 2024, two of the 16 senior managers had resigned while another senior manager had been medically boarded[6]. TT expected that one more senior manager would resign by 30 November 2026.

The following information regarding the fair value of the share options is available:

Date	Fair value per option adjusted for the market performance condition only	Fair value per option adjusted for the market performance condition and service condition
1 December 2023	R4,50	R4,40
30 June 2024	R4,10	R3,98

The accountant has not yet processed any journal entries relating to the share option scheme for FY2024, but provided the following draft journal entry:

	Dr.	Cr.
	R	R
Interest expense (P/L)	159 200	
Cash settled share-based payment liability (SoFP)		159 200
(12 x 10 000 x R3,98 x 12 / 36)		
Recognising the share-based payment liability		

6 Additional information

1 The JSE yielded an annual return of 14,5%.
2 The South African Reserve Bank's central bank rate is 8,25%, while ten-year government bonds are yielding 10,7% currently.
3 An actuarial consultant in the insurance industry was contacted regarding the risk of adding drones to the business. The analyst indicated that drones are complex and could potentially harm property and people. They are also vulnerable to theft, which in turn poses a cyber security risk due to the data they carry. Drones are susceptible to human pilot error, as well as ethical and social risks. He indicated that after looking at the calculations provided, an adjustment to the unlevered beta of the company of 0,24 would be appropriate to adjust for the project-specific risk of Project Drone for TT.
4 The corporate tax rate in South Africa is 27%.
5 Hamada formula: Beta (levered) = Beta (unlevered) x [1 + [(1 – tax rate) x (debt / equity)]]
6 TT uses the cost model to account for all property, plant and equipment and depreciates its assets on a straight-line basis.

[6] Medical boarding is the inability of an employee to work due to ill health or injury. This is not seen as a resignation and the employee is therefore not disqualified from participation in the share option scheme.

INITIAL ASSESSMENT OF COMPETENCE, JANUARY 2025

PROFESSIONAL PAPER 3

This paper consists of one scenario and two required parts.
Answer each required part in a separate answer book.

PAPER 3 PART I – REQUIRED		**Marks**	
		Sub-total	**Total**
(a)	Calculate the WACC as at 30 November 2023 that TT could use in evaluating whether to invest in Project Drone. • Ignore VAT.	12	12
(b)	Using the forecast information for Project Drone provided by Denzil, calculate the IRR and conclude on whether it was the correct decision for TT to go ahead with the drone fleet purchase. • Use the WACC rate provided by the director as the benchmark rate. • Provide brief explanations for any irrelevant amounts. • Ignore the information relating to the sale of the planes. • Ignore VAT. *Y4: Judgement and decision making* *Y3: Problem solving*	34 *1* *1*	36
(c)	Discuss the key strategic risks and benefits in the decision to invest in drones that may affect the overall sustainability of SprayT and provide overall mitigating actions for the strategic risks identified. • Ignore VAT. *Discussion on risks and benefits: 8 marks; discussion on mitigating actions: 3 marks* *Z1: Business internal environment* *Z2: Business external environment*	11 *1* *1*	13
Total for part I			**61**

INITIAL ASSESSMENT OF COMPETENCE, JANUARY 2025

PROFESSIONAL PAPER 3

This paper consists of one scenario and two required parts.
Answer each required part in a separate answer book.

PAPER 3 PART II – REQUIRED		**Marks**	
		Sub-total	**Total**
(d)	Provide the correcting journal entries relating to the loan from BuzzFin, for the year ended 30 June 2024. • Provide brief explanations for your correcting journal entries. • Ignore all forms of taxation.	11	11
(e)	Discuss any concerns you may have about the draft journal entry prepared by the accountant relating to the share option scheme for the year ended 30 June 2024, and advise the accountant on the correct accounting treatment of the share option scheme. • Support your discussion with calculations where necessary. • Do not provide correcting journal entries. • Do not discuss any presentation and disclosure requirements. • Ignore all forms of taxation. *Y1: Critical thinking*	13 *1*	14

(f)	Recommend substantive tests of details that the auditors of TT should perform to obtain sufficient and appropriate audit evidence related to the classification; rights; and accuracy, valuation and allocation assertions pertaining to the agricultural drones of TT for the financial year ended 30 June 2024.
	
	• The following procedures have already been performed and should not be included in your recommendations:
	  ○ Obtained all relevant schedules from management.
	  ○ Cast and cross-cast all relevant schedules.
	  ○ Obtained a management representation letter regarding all assertions.
	  ○ Agreed all totals to the general ledger and trial balance.
	  ○ Stratified all fixed asset registers.
	  ○ Selected a sample for testing.
	  ○ Auditing of the notes to the financial statements.
	  ○ Scanning for and following up on abnormal / unusual items.
	• Consider VAT.
	
	Y2: Integrative thinking
		33
		
		1
			34

Total for part II			**59**
TOTAL FOR PAPER 3			**120**