

**UNIVERSITY OF KWAZULU-NATAL**  
**SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE**  
**MAIN EXAMINATION PAPER 1 - NOVEMBER 2021**  
**ADVANCED MANAGERIAL ACCOUNTING AND FINANCE**  
**(ACCT6DMWYPY)**

**DURATION: 2.5 HOURS**

**TOTAL MARKS: 100**

**DO NOT TURN THIS PAGE OVER UNTIL INSTRUCTED TO DO SO**

**Internal examiners:** Prof R Rajaram, Dr P Shewell

**Internal moderator:** Prof R Rajaram, Dr P Shewell, Ms K Ramnanun

**External examiner:** Mr K Freeman (CA) SA

**INSTRUCTIONS TO CANDIDATES**

1. This question paper consists of **TWO** questions set out on pages 2 to 9, excluding the required section.
2. You have been issued with **TWO** answer books. Please answer each question in a separate answer book.
3. Write on both sides of the pages.
4. Fill in **ALL** the details required on the front of **EACH** answer book:
  - Seat number.
  - Student number.
  - Date.
  - Question number.
  - Number of answer books handed in for **each question** (e.g. Question 1: 2 books).
  - Total number of answer books handed in for this examination (e.g. this exam: 3 books).
5. Use only blue or black ink. **Do not write in pencil.**
6. On completion, insert all answer books in numerical order under the cover of your answer book for **Question 1**.
7. If you submit a **BLANK** or **EMPTY** answer book, you are required to write on the **COVER** of the **ANSWER BOOK** – “**BLANK BOOK**”.
8. Marks and suggested time:

<b>Question</b>	<b>Marks</b>	<b>Minutes</b>
Question 1	50	75
Question 2	50	75

**UNIVERSITY OF KWAZULU-NATAL**  
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**Question 1 (50 marks: 75 minutes)**

You are the management accountant of Boots for Berg Pty (Ltd) (BB). The company was established in 2015 by Roger Star, a Kwa-Zulu Natal based former national mountain climbing champion. Roger leveraged his reputation and international network to grow the production and sales of mountain and hiking boots. Roger is the Chairperson of the International Federation of Sports Climbing and is held in high esteem for his knowledge of mountain climbing. Seventy percent of BB's shares are owned by Roger and the balance by Business Partners, who requested the 30% of the shareholding in exchange for the provision of a repayable working capital loan.

The company produces two distinct types of boots; a boot for hiking and another for mountaineering. The mountaineering boot is a high-top footwear designed for use in mountainous terrain, such as permanent snowfields, glaciers, and alpine rock. These boots are produced only for the export market. BB's hiking boots are made for use on rocks, mud and grass. Approximately 60% of hiking boots are exported. All manufacturing is undertaken at a rented warehouse situated in the Maloti Drakensberg Park, which is a World Heritage Site.

The strengthening of the rand in the past year by approximately 15% has eroded margins of the company's products. In addition, the company has experienced logistical problems with the import of a specialised leather from a Brazilian Tannery for use in its leather soles. Each sole comprises of leather and poly urethane to allow for a durable but comfortable sole. In 2019, BB was awarded a patent on the sole due to its unique foot cushioning properties.

The Brazilian tannery has experienced a significant reduction in production due to the impact of Covid-19. Roger was recently informed that the specialised leather for soles, utilised for production in both the hiking and mountaineering boots, will be limited to sixteen thousand square meters in the September 2022 financial year, at an estimated landed cost of R60 per square meter. The current landed cost is R50 per square meter.

**REDUCED PROFITABILITY**

BB's audited financial statements for the year ending 30 September 2021 indicated a net profit after taxation of R4,2 million after taxation, notwithstanding difficult trading conditions and working capital shortages.

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You have, in consultation with the marketing and production director, prepared the following information relating to the production of both boots for the financial year ending **September 2021**:

	<b>Hiking Boot</b>	<b>Mountain Boot</b>
Selling price per pair	1 800	2 200
Direct Labour cost per pair	250	300
Labour Hours per pair	3	4
Direct Material Cost per pair (10% relates to the specialized leather for the sole)	600	700
Production overheads per pair	250	300
Selling overheads per pair	100	140

You have also assembled the following information:

- The selling price represents the average sales price per pair, which is expected to decline by 12% and 6% for hiking and mountain boots respectively in the next financial year (September 2022 financial year), due mainly to the strengthening of the rand against the dollar.
- Direct labour cost includes a fixed component, relating to production supervisors for each type of boot, as well as casual labourers from the local Drakensburg community. The current variable rate is R40 per hour. Labour costs are anticipated to increase by 6% in the next financial year.
- Direct material costs, other than the specialised leather, are expected to increase by 10% in the next financial year.
- The company uses a blanket overhead absorption-based costing system. The production overhead per pair comprises of 70% fixed costs. Due to a cost reduction strategy, manufacturing overheads will not increase in the next financial year.

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**SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE**  
**MAIN EXAMINATION PAPER 1 - NOVEMBER 2021**  
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**(ACCT6DMWYPY)**

- During the current year, 10 000 pairs of hiking and 8 000 pairs of mountaineering boots were produced respectively. It is expected that this demand will increase by 5% in the next financial year due to the reopening of several major international outdoor tourist attractions. The business has a capacity to produce 22 000 units.
- 40% of the selling overheads are fixed in nature for the current year. The fixed and variable selling costs per pair are expected to increase by 10% in the next financial year.
- Due to the supply constraints and the impact of Covid-19, BB did not carry any stock of finished goods or raw materials at the beginning of the September 2021 financial year, nor will there be any stock at the end of the year. However, BB will revert to holding stock of finished goods stock of 10% of sales for the next financial year.
- Non-manufacturing costs of R1,5 million in the current financial year and are anticipated to increase by 10% next year. The company pays tax at a rate of 28% on all profits.

**OFFER FROM THE OUTDOOR ACTION GROUP**

Roger Star was recently approached by the Financial Director of the Outdoor Action Group (OAG), with a written offer to acquire 51% of BB's shares from him. OAG is a listed retailer that specialises in the manufacture of sports apparel and has a PE ratio of 12. OAG's offer to purchase comprises of R5m for the consideration of 51% BB's shareholding from Roger and a separate cash injection to alleviate working capital shortages. The financial director of OAG is utilising the **September 2022** budgeted net profit as a basis for the valuation.

**UNIVERSITY OF KWAZULU-NATAL**  
**SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE**  
**MAIN EXAMINATION PAPER 1 - NOVEMBER 2021**  
**ADVANCED MANAGERIAL ACCOUNTING AND FINANCE**  
**(ACCT6DMWYPY)**

**Question 2 (50 marks: 75 minutes)**

Greg Jones and his new wife had a passion for coffee and a dream of opening their own coffee shop. A coffee shop is considered a profitable business to start in South Africa. As the average income has risen steadily, there has been an increase in coffee consumption. Additionally, this increase in coffee sales in recent years is due to the growing middle class which has resulted in a growing coffee and café culture.



There are now more than 100 roasteries growing and roasting their own coffee right here in South Africa, up from only about 20 a decade ago. Coffee drinking is in fact growing fast in many emerging markets. Greg has commissioned market research (at an upfront cost of R10 000) from Famous Bean ([famousbean.co.za](http://famousbean.co.za)) and, as background to the industry, was able to establish the following:

- Coffee drinking is growing fastest in many emerging markets
- Independent coffee cafes can sell an average of 300 cups of coffee in a day
- South African's consume more than 20 000 tonnes in a year
- Sector income has grown more than 7% year on year since 2014
- On average a cup of coffee sells for R25
- A number of franchise opportunities are available.

Greg was further able to identify that there are many benefits currently facing the sector, including the fact that it is a high growth market, and customers are willing to pay more for speciality coffee. It is also very much a community business with a very social environment, which exactly suits his personality as he is a very outgoing person. There is also the opportunity to receive training, and provide training to staff, to become specialist baristas (barista = a person who prepares and serves coffee in a bar or restaurant) and entering one of the many barista competitions springing up throughout the country.

However, with all the industry potential, Greg's research also led him to identify some of the many challenges facing the sector. One of these being increasing customers average spend. It is relatively easy to get customers to stop by for the daily cup of coffee, but how do you grow your business and add products that will encourage greater average spend per customer.

**UNIVERSITY OF KWAZULU-NATAL**  
**SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE**  
**MAIN EXAMINATION PAPER 1 - NOVEMBER 2021**  
**ADVANCED MANAGERIAL ACCOUNTING AND FINANCE**  
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In addition, competition is very strong, with new independent coffee shops sprouting up in cities at a record rate. With this in mind, value is still important, and offering a top-quality product at a competitive price remains key. Many chains are offering loyalty cards to retain customers.

Staff motivation and retention can also be a challenge. Many employees are young and view the job as a stop-gap or rung on the ladder of their career and a temporary position. Once you have invested in training how do you get staff to stay.

The final challenge that many coffee shop owners have had to encounter as the industry has grown worldwide is a backlash from socially and environmentally conscious consumers. Consumer complaints range from the impact of the use of disposable cups on the environment, to the need to know where their coffee is grown and how it is produced to gain assurance that it meets fair trade requirements.

There are a number of ways of getting into the coffee business, and Greg first considered a franchise, but with franchise opportunities starting with an initial investment of R1 million required, this option was just not open to him as he did not have access to the required capital. He crunched some numbers in respect of a small shop in a Mall in the local community where he lives, which he could have acquired the lease for, but the financial commitment required, especially in a time of uncertainty relating to Covid-19 was very concerning for him as a potential new business owner. He was just about ready to give up on the dream when he noticed a 'Coffee cart' for sale online, complete with a working industrial coffee machine, for a total cost of R120 500. A Mobile Coffee / Tea business is a great way in which to begin your barista business venture thanks to its relatively low start-up cost and popularity amongst the masses. It has certainly attracted many start-ups in the last few years, and in all sorts of vehicles!



With his and his wife's combined savings as well as the help of a relative he is hoping to acquire the coffee cart, however he needs to provide his relative with some data to show that the venture can be successful. He set about identifying the legal requirements for setting up a business in such a cart, and what kind of licencing would be required. He also surveyed a number of possible locations. Once having identified a location alongside a local school, he was able to negotiate a potential lease with them to park the van permanently alongside their premises. There is a lot of

**UNIVERSITY OF KWAZULU-NATAL**  
**SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE**  
**MAIN EXAMINATION PAPER 1 - NOVEMBER 2021**  
**ADVANCED MANAGERIAL ACCOUNTING AND FINANCE**  
**(ACCT6DMWYPY)**

competition in the area in the form of both franchise coffee shops, as well as another mobile coffee operator. The other mobile operator was one of the motivations for Greg to embark on his venture as he noted how they have multiplied their vans and locations in the past year or two, thus he has realised the potential for this kind of operation.

His analysis in support of the potential success of this venture is now based on the following cost and revenue data that he has been able to put together:

Greg will supply a range of coffee products, and as per the market research expects to average R25 per cup sold. He is also going to sell hot chocolate at a price of R28 per cup. After testing many local brands, he has selected a local South African grown and roasted coffee bean which he will acquire in 10kg bags for R2432 a bag. Whilst undertaking his research, the grower had gifted him two 10 kg bags which he still has in stock. An average of 90-105 cups of coffee can be yielded per 1kg of beans. Hot chocolate costs R160 for a 1.5kg tub, however the yield for hot chocolate is lower than for coffee being on average 50 cups per kilogram of powder. Other variable costs including the cups, the sugar and sweeteners and stirrers average R4 per cup sold of either coffee or hot chocolate at current prices. He has undertaken a survey of school parents and is confident that he can sell 200 cups of either hot drinks per day, and estimates that 15% of these will be hot chocolate and 85% coffee.

Greg has taken note of the concerns regarding having additional products to sell to broaden the product base and increase the average spend per customer. Initially he has sourced home-made rusks, muffins and donuts to offer in addition to the drinks. He is unsure how many customers will purchase the additional food items, but is expecting an 80% probability that 75% of people who stop by to purchase a drink will also purchase one of these items, and a 20% probability that it will be 90% of the people who will purchase a food item. Purchasing a food item is expected to add an additional R8 in contribution (40% contribution margin ratio) to those drink sales where it applies.

The coffee cart will operate 6 days a week and 8 hours a day during term time, offering Greg 250 day's operations per year. Owing to the nature of the coffee cart it will be difficult to move and he will therefore not operate it at all during the School holidays. Greg has contracted a barista at a

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**SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE**  
**MAIN EXAMINATION PAPER 1 - NOVEMBER 2021**  
**ADVANCED MANAGERIAL ACCOUNTING AND FINANCE**  
**(ACCT6DMWYPY)**

rate of R35 per hour to commence work when the business starts operating. His research indicates that this is above the median rate for Barista's in South Africa, but he wants to ensure quality in his product offering. He has already provided additional training for the barista, at a cost of R5000 for the two-day course, in preparation for the opening of the business. The barista will have the opportunity to also earn tips in addition to daily earnings. Greg plans on being very hands on and both the Barista and he will be the sole employees of the business.

The School has offered Greg a lease for one year with an option to renew indefinitely. The initial monthly lease will be R1000 pm, and this is expected to escalate at 6% per annum if the lease is renewed. He has further established that the cost of a small business licence from the Ethekewini Municipality is currently R573 per annum.

Greg has already registered a private company for the operation of his business, and has plans to hopefully grow the business over the coming years dependent on the success of this first venture. He has registered with SARS for tax purposes, and has been advised that he will be able to deduct Wear and Tear based on the initial cost of the Mobile coffee cart over four years on a straight-line basis. Maintenance for the coffee machine is estimated at R3000 per annum. At the end of four years it is anticipated that this cart will have no residual value.

The research undertaken suggests whilst coffee and hot chocolate sale volumes are predicted to grow at 7% per annum, price and cost inflation will amount to 6% per annum. Given the risk involved in a venture of this nature, a discount rate of 25% will provide the required returns for the investor. Taxation is at 28%. Ignore VAT implications.

### **Potential IT Investment**

In deliberating his business idea with a friend, they were discussing opportunities that may give them a competitive advantage. His friend is an IT specialist, and he had some ideas about an online ordering system that he had read about which is in operation in some coffee shops in the UK, but not yet seen anywhere in South Africa. The idea is that customers can order and pay for coffee whilst still at home, and the online system in the shop detects when they are within 100 meters of the store and begins to prepare the coffee in advance and has it ready upon the customers arrival. This system can work through either the customers' smart phone or smart

**UNIVERSITY OF KWAZULU-NATAL  
SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE  
MAIN EXAMINATION PAPER 1 - NOVEMBER 2021  
ADVANCED MANAGERIAL ACCOUNTING AND FINANCE  
(ACCT6DMWYPY)**

watch. Greg's friend is going to look into the cost of developing and setting up a similar system for Greg once his business is up and running.

**UNIVERSITY OF KWAZULU-NATAL  
SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE  
MAIN EXAMINATION PAPER 1 - NOVEMBER 2021  
ADVANCED MANAGERIAL ACCOUNTING AND FINANCE  
(ACCT6DMWYPY)**

**Question 1 (50 marks: 75 minutes)**

**YOU ARE REQUIRED TO:**

	<b>Required:</b>	<b>MARKS</b>
<b>a)</b>	Determine the optimal production plan for the next year considering the reduced available leather for production. You must also calculate the net profit after taxation based on this optimal production plan.	<b>25</b>
<b>b)</b>	Identify possible interventions that management could implement in order to enhance the profitability of BB.	<b>10</b>
<b>c)</b>	Critically discuss the factors that Roger Star should consider when deciding whether or not to accept the offer from OAG for the purchase of a portion of his shareholding.	<b>12</b>
	Layout, Planning and Communication.	<b>3</b>

**ROUNDING**

- ALL PERCENTAGES TO THE NEAREST FULL PERCENTAGE
- ALL RANDES TO THE NEAREST R000
- ALL OTHER FIGURES TO THE NEAREST TWO DECIMAL PLACES

**UNIVERSITY OF KWAZULU-NATAL  
SCHOOL OF ACCOUNTING, ECONOMICS AND FINANCE  
MAIN EXAMINATION PAPER 1 - NOVEMBER 2021  
ADVANCED MANAGERIAL ACCOUNTING AND FINANCE  
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**Question 2 (50 marks: 75 minutes)**

**YOU ARE REQUIRED TO:**

<b>Required:</b>		<b>Subtotal</b>	<b>MARKS</b>
<b>a.)</b>	Determine the NPV of the investment in Greg's first coffee cart based on financial criteria. Any costs considered not relevant must be justified. Account for uncertainty in food sales using expected values and in coffee input volumes by identifying the minimum and maximum NPV's.  <b>Round all numbers and amounts to the nearest whole unit/Rand</b>		30
<b>b.)</b>	Provide a SWOT analysis and consider the attractiveness of the coffee market from Greg's perspective. <ul style="list-style-type: none"> <li>• SWOT analysis maximum</li> <li>• Market attractiveness maximum</li> </ul>	11 4	15
<b>c.)</b>	Calculate the break-even sales value in the first year, and allocate this between the three product lines, based on the expected mix of sales.		5

**ROUNDING**

- ALL PERCENTAGES TO THE NEAREST FULL PERCENTAGE
- ALL RANDES TO THE NEAREST R000
- ALL OTHER FIGURES TO THE NEAREST TWO DECIMAL PLACES