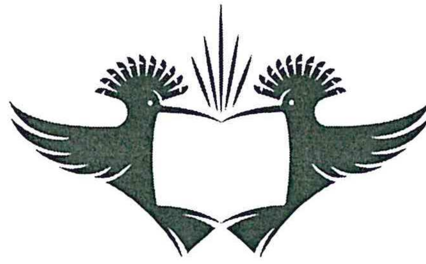

Department of Accountancy

Financial Management 300

REPLACEMENT ASSESSMENT OPPORTUNITY JANUARY 2019

Time: 3 hours & 45 minutes (37 min. reading time & 188 min. writing time) **Marks: 125**

Assessors: Ms M Boshoff
Ms M McKenzie
Mx M Maredi
Ms E Kocks
Mr J Griffioen
Mr T Madiba

Moderator: Mr E Pullen (UWC)

INSTRUCTIONS:

- This paper consists of 11 pages.
- Answer ALL questions.
- Start each question on a new page.
- Silent, non-programmable calculators may be used, unless otherwise instructed.
- Show all calculations clearly. Round all calculations to two decimal places.

QUESTION 1 **(50 MARKS)**

GARMINE GPS

Garmine GPS Ltd (hereafter "Garmine") is a manufacturer of sports and fitness watches and is located in Johannesburg. The company's management recently realised that Garmine's competitors have been very aggressive in implementing new technologies, which has resulted in one of Garmine's watch models losing sales. A competitor has recently introduced a new model, which has more functions than Garmine's current GPS100 model.

The marketing manager of Garmine asked a market research company to evaluate the market through a customer questionnaire, which indicated that the consumers demanded the newer technology, and would demand a drop in the price of the older technology GPS100, or the introduction of an improved model. Garmine paid the market research company R100,000 for this research.

Subsequent to the issuing of the report, the marketing manager consulted with the head of research and development of Garmine, who indicated that they could upgrade the watch technology to be superior to that of the competitor, but that this would require a new production machine to produce the watch (named the GPS200). He had asked the Chinese manufacturer of the machine to provide a quotation for the new machine. The quotation was received and indicated that the machine would cost approximately R10,000,000 to manufacture, deliver and install. The price was quoted in US dollars and converted into rand, with the supplier indicating it would not accept payment in Rand. The exchange rate at date of purchase is expected to be R16:$1.

The new machine can produce 10,000 GPS200 watches a year. The market research company was once again contacted, and asked to determine the interest of the market in the proposed improved technology GPS200 watch. The market researchers determined that there was much interest, and that there was a 70% chance that the company could sell 8,000 GPS200 watches a year, but that due to the political uncertainty in the country, there was a 30% chance that due to rising unemployment and slow growth, that they would only sell 5,000 GPS200 watches per annum. The company anticipated that the watch technology would last for approximately four years with minor tweaks before the product would become obsolete. At this stage, the expectation is that the machine could be sold for R5,000,000 to a competitor, or it could be refurbished and upgraded at a cost of R1,000,000, after which it could be sold for an estimated R12,000,000 at the end of year 4.

The company has an existing watch manufacturing machine for the GPS100; this machine was purchased three years ago, and had a useful life of five years. Should the decision be made to go ahead with the GPS200 project, this machine will be replaced by the new machine. The machine was originally purchased for R5,000,000, and has a tax value of R2,000,000. Both the new machine and the old machine qualify for a 20% per annum wear and tear allowance. The old

machine can be sold for R1,500,000 immediately, or if only sold in two years' time at the end of its useful life, it could be sold for R200,000. If the company does not sell the old machine, it could still produce and sell the old watches to a limited extent, which would earn the company profits before tax and interest of R150,000 in each of the remaining two years of its useful life.

The following revenue and expenses relate to the manufacture and sale of the new GPS200 model:

New machine	Notes	Rands
Selling price		R4,000 per watch
Variable costs (raw material and labour)	2	R1,000 per watch
Fixed production costs	3	R10,000,000 per annum
Marketing costs		R2,000,000 per annum
Allocated head office costs	1	R1,000,000 per annum
Inventory of existing straps	2	1,000 straps

Notes

1. The allocated head office cost is an allocation of the accounting department's costs for 10% of their time. The accounting department does have spare capacity at present for additional work.
2. Currently R200 of the estimated variable cost per watch relates to the watch straps. The company currently has 1,000 straps in stock from the GPS100 model, which at a cost of R50 each, can be adapted to be used for the GPS200 model. The original cost of these straps was R100 each. If not used for this purpose, they will have no other use for the straps, but can sell them to a competitor for R160 per strap.
3. The fixed costs relate directly to the new machine, and will not be incurred if the GPS200 model is not introduced.
4. The company will require the following working capital to fund the production process, the investment of which will be required at the beginning of each year:

Year	1	2	3	4
Working capital (R)	50,000	60,000	75,000	80,000

Financing of the machine

The company has sufficient cash resources available for the project. The financial director uses market values of his sources of funding to determine the optimal capital structure of the company.

The company has one million shares in issue which are listed on the Alt^X Stock Exchange, which are currently trading at a value of R150 per share. The company currently has a beta of 1.2.

The company has debt financing in the form of debentures and loans. The debentures, issued at nominal value of R100 million, pay a coupon rate of 10% per annum (interest being payable annually in arrears) and are redeemable in five years' time at their nominal value. Similar debt instruments are currently yielding 12% per annum.

The other debt financing entails a long-term loan of R50 million. The loan bears interest at a fixed rate of 8% per annum; similar loans currently yield 11%. The loan has no fixed repayment terms. The nature of this loan has been determined not to be equity.

Other information

1. The yield on the RSA209 government bond is estimated to be 10%, and the required return on the South African equities market is estimated to be 16%.
2. Assume a company tax rate of 28% for each year.
3. Capital gains inclusion rate for companies is currently 80%

QUESTION 2 **(40 MARKS)**

Lewis Group Limited (hereafter called "Lewis Group" or "the Group") is one of South Africa's leading credit retailer that sells household furniture and electrical appliances. The Group's origins date back to 1934 when the first Lewis store was opened in Cape Town, trading as Lewis Stores (Pty) Ltd. The company experienced rapid growth in the 1940s and on the 30th October 1946, the company listed on the JSE as Lewis Stores Limited in order to raise capital for its rapidly expanding business. By the end of 1957, Lewis Stores Limited had 55 stores trading under Barons, Excelsior Meubels, Lewis and Universal Stores. Between 1969 and 1972, the company opened a number of stores in Botswana, Namibia, Lesotho and Swaziland. In 2004, Lewis Sores Limited changed its name to Lewis Group.

The Group continues to be a leading retailer of household furniture and electrical appliances through its four trading brands: Lewis, Beares, and Best Home and Electric, and the recently acquired United Furniture Outlets (UFO) brand. For the year ended 31 March 2018, the company's Lewis brand had 530 stores including 110 stores in Botswana, Lesotho, Namibia and Swaziland. The Lewis brand continues to open smaller format stores which now account for 212 of the brand's 530 stores. Beares is focussed on offering a range of aspirational furniture and the brand has 110 stores across the country. The Best Home and Electric brand has over 130 stores that retail home electrical appliances, sound and vision equipment and selected furniture lines. The UFO brand was added to the Group on 1 February 2018 following the Group's 100% acquisition of United Furniture Outlets (Pty) Ltd. UFO is a cash retailer of luxury household furniture to the higher income market and the brand has 30 stores in Gauteng.

The Group, subsequent to the year ended 31 March 2018, entered the home shopping market with the launch of INspire, an omni-channel retail offering to be marketed through outbound call centres, agents and online shopping at www.inspire.co.za . INspire product offering includes linen, bedding, tableware, cookware and small electrical appliances. The Group's strategy is to attract customers in the LSM4-8 categories thus extending the Group's reach to urban areas. (http://www.lewisgroup.co.za/investors/financial-results-centre/integrated-annual-reports/).

You recently joined a firm of equity analysts, Las Vendas Equities, as a junior analyst. One of your clients, Mr Fhuluwani Dagada, is planning to invest in the Lewis Group's shares. Mr Dagada wants to understand the Group's financial performance in the last two years that ended 31 march 2018 and 2017. Extracts from the Group's 2018 Annual Report are contained in Annexure 1 below.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS AT 30 JUNE 2018 AND 2017		
ASSETS	**2018**	**2017**
Non-current assets	**Rm**	**Rm**
Property, plant and equipment	301.8	343.5
Goodwill trademarks	305.4	71.7
Other financial assets	562.1	510.9
Deferred tax	10.9	48.9
	1,180.2	**975.0**
Current assets		
Inventories	579.7	447.7
Current tax receivable	136.5	181.1
Trade and other receivables	4,068.9	4,225.8
Financial assets-insurance investments	211.0	850.3
Cash and cash equivalents	608.4	788.6
	5,604.5	**6,493.5**
Total assets	**6,784.7**	**7,468.5**
EQUITY AND LIABILITIES		
Equity attributable to equity holders		
Share capital and premium	425.0	588.5
Treasury shares	(480.2)	(480.2)
Retained earnings	5,503.7	5,332.1
Total equity	**5,448.5**	**5,440.4**
LIABILITIES		
Non-current liabilities		
Long-term interest-bearing borrowings	-	700.0
Deferred tax	121.0	89.0
Retirement benefit liability	89.8	101.7
	210.8	**890.7**
Current liabilities		
Trade and other payables	417.0	271.3
Reinsurance and insurance liabilities	176.8	618.8
Short-term interest-bearing borrowings	531.6	247.3
	1,125.4	**1,137.4**
Total liabilities	**1,336.2**	**2,028.1**
Total equity and liabilities	**6,784.7**	**7,468.5**

CONSOLIDATED INCOME STATEMENTS FOR THE YEARS ENDED 28 FEBRUARY 2018 AND 2017			
		2018	**2017**
	Notes	**R'000**	**R'000**
Total revenue	1	5,556.8	5,592.1
Merchandise sales	2	2,865.0	2,607.9
Other revenue	3	2,691.8	2,984.2
Merchandise cost of sales		(1,677.8)	(1,501.0)
Gross profit		**3,879.0**	**4,091.1**
Operating expenses	4	(3,499.7)	(3,527.0)
Operating profit before investment income		**379.3**	**564.1**
Investment income		62.4	104.9
Operating profit		**441.7**	**669.0**
Interest received		38.9	39.4
Interest paid		(88.1)	(187.8)
Profit before tax		392.5	520.6
Tax expense		(128.4)	(163.1)
Net profit attributable to ordinary shareholders		**264.1**	**357.5**

Notes:

Note 1			
		2018	**2017**
		Rm	**Rm**
Total revenue by division		**5,556.80**	**5,592.10**
Lewis		3,950.20	4,137.00
Electric		732.50	725.40
Beares		808.10	729.70
UFO		66.00	-

Note 2			
		2018	**2017**
Merchandise revenue and gross profit		**Rm**	**Rm**
Merchandise sales		2,865.00	2,607.90
Merchandise cost of sales		(1,677.80)	(1,501.00)
Merchandise gross profit		**1,187.20**	**1,106.90**

Note 3		2018	2017
		Rm	Rm
Other revenue		2,691.80	2,984.20
Finance charges and initiation fees earned		1,361.60	1,451.80
Insurance revenue		671.00	822.30
Ancillary services		659.20	710.10

Note 4		2018	2017
		Rm	Rm
Operating expenses		**3,499.70**	**3,527.00**
Debtor costs		957.30	1,065.50
Employment costs		1,059.10	987.00
Occupancy costs		373.20	370.80
Administration and IT		328.80	318.40
Transport and travel		205.00	202.80
Marketing		246.60	222.00
Depreciation and armortisation		85.90	90.10
Other operating costs		243.80	270.40

QUESTION 3 **(30 MARKS)**

Decorative Living Limited is listed on the JSE and specializes in products for the building industry in South Africa. The company has a divisional structure, consisting of three investment centres, namely Paints, Frames and Glass. Miss Tiny Young, the Financial Director, is responsible for the financial affairs of all three divisions within the company. The strategic goals of the company are to focus on high quality items with exceptional durability. As a Proudly South African company, Decorative Limited also focusses on job creation and using sustainable resources.

The Frame Division, situated in the Western Cape, manufactures frames for sale to local retailers.

The Glass Division, who shares premises with the Frame Division, manufactures special glass panels for sunroofs.

The Paint Division, situated in Gauteng, produces paint in various colours for exterior use.

The Western Cape Operations

Based on the new company policy, the Financial Director has instructed the Frames Division to transfer frames to the Glass division at a negotiated transfer price instead of the Glass Division purchasing all frames externally. Currently frames are purchased directly from a frame supplier at R108. The Frames division currently has the capacity to produce 40 000 frames per month whilst the demand for glass panels to contractors have remained constant at 40 000 units per month. The Production Manager has insisted that a minimum of 10 000 frames still need to be available externally to supply demand of regular customers as they are currently selling 75% of their capacity. The Financial Director has agreed to this condition, leaving the number of units transferred and transfer price negotiations to the Production Managers of each division to come to an agreement which is most beneficial for the company as a whole.

For the financial year ending 31 December 2018, the Frames Division estimated the variable cost per frame at R100 and the Glass Division estimated the variable cost per panel excluding the frame at R250.

The Management Accountant prepared the following information on request of the Production Managers:

Demand for frames and glass panels	Contribution per frame	Contribution per glass panel (excluding cost of frame)
10 000	R30	R175
20 000	R20	R170
30 000	R15	R165
40 000	R10	R150

The Gauteng Operations

The company sells paint in 20 litre containers to building contractors, property developers, hardware stores and paint shops. Currently the company sells paint at R500 per container at a demand level of 48 000 containers per month. The cost to manufacture one container is R435.

Due to the latest trend of Tuscan style buildings and plastering of walls, the demand for exterior paint has increased significantly. The expected demand for the third quarter is estimated to be 54 000 containers per month. The Gauteng division has been producing at 100% labour capacity for the past quarter and is considering negotiating overtime with staff for the coming quarter to ensure supply of the additional 6 000 units. Staff will be remunerated at 1.5 times the normal rate per hour for all hours worked after normal hours, but it is expected that no more than 4 500 additional labour hours will be agreed to by the workers.

The Production Manager has suggested, as an alternative to staff working overtime, that the Board consider replacing one of the main manufacturing machines with a new and improved version.

The Production Manager explained the following cost and benefits of the new machine to the Board:

- The machine will be leased at a cost of R200 000 per month.
- The normal spoilage per container is estimated to be only 5% with the new machine.
- If the new machine is taken into use and they produce 54 000 containers of paint per month, it will result in 10% of the current staff being made redundant immediately due to the new machine being more efficient, resulting in less direct labour input per unit required. After the first month's production of 54 000 units on the new machine, a further 20% reduction in direct labour input per unit will be obtained due to the labourers becoming more familiar with the new machine. Thereafter the direct labour input hours per container will remain the same. For all staff made redundant due to the implementation of the new machine, one month salary will have to be paid as retrenchment package.
- Two additional supervisors need to be employed at monthly salary of R22 000 each.
- Maintenance including resetting all machinery and full clearing, need to be performed every 4 500 units at an estimated cost of R220 000 per maintenance performed.
- The new machine has a capacity of 58 000 units per month.

You are appointed as Group Management Accountant to assist with information for decision making.

(Scenario: NWU)

QUESTION 1 **(50 MARKS)**

REQUIRED		MARKS
(a)	Calculate the weighted average cost of capital for the company to be used for the project evaluation.	10
(b)	Determine whether the company should replace the existing machine and GPS100 watch line with the new machine and GPS200 watch line. Your analysis should include: • An identification of items which you have chosen not to include.	30
(c)	Calculate the break-even point in number of watches per annum for the new line, assuming that your net present value (NPV) for the new line was calculated at R17 million and a weighted average cost of capital (WACC) of 13% applies.	4
(d)	Briefly discuss what other factors should be considered prior to making the final decision in relation to the machine replacement.	6
TOTAL MARKS		**50**

QUESTION 2 **(45 MARKS)**

REQUIRED		MARKS
(a)	Prepare a memorandum to Mr Fhuluwani Dagada that analyses the revenue and the profitability of Lewis Group. *Communication skills – report layout, structure and logical argument.* *(Hint: Your report should include all the relevant ratios, trends, and logical comments and possible reasons for observed changes).*	41
(b)	Suggest any additional information that may need in order to make an informed decision on whether to invest in the Lewis Group's shares.	4
		45

QUESTION 3 **(30 MARKS)**

REQUIRED		MARKS
(a)	Critically evaluate the Financial Director's suggestion that the Production Managers negotiate a transfer price and transferred quantities instead of centralising the decision.	6
(b)	Calculate the range of transfer prices you would consider acceptable to the company based on the cost structure that the Glass and Frames division are currently using. Include a benefit analysis for the company as a whole.	13
(c)	Discuss any qualitative factors that should be addressed before implementing the transfer pricing agreement.	7
(d)	Discuss the acceptability of the options available (to meet the demand with or without the new machine in the paint division) to the different stakeholders of the company.	4
TOTAL MARKS		**30**