

**MAC3702**

May/June 2015

APPLICATION OF FINANCIAL MANAGEMENT TECHNIQUES

Duration : 2 Hours

100 Marks

EXAMINATION PANEL AS APPOINTED BY THE DEPARTMENT.

Use of a non-programmable pocket calculator is permissible.

Closed book examination.

This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue.

This paper consists of 10 pages.

PLEASE NOTE:

1. This paper consists of FIVE (5) questions.
2. All questions must be answered.
3. Basic workings, where applicable, must be shown.
4. Ensure that you are handed the correct examination script (blue) by the invigilator.
5. EACH QUESTION MUST COMMENCE ON A SEPARATE PAGE.
6. A combined final mark of 50% is required to pass this module. The final mark is calculated as follows: (20% of the average mark obtained for the first two assignments) + (80% of mark obtained in this examination). The year-mark will only be taken into account if a subminimum of 40% is obtained for this examination.

PROPOSED TIMETABLE

Question	Topic	Marks	Minutes
1	Advanced Analysis of Information	25	30
2	Cash management	10	12
3	Required Returns	30	36
4	Mergers and Acquisitions	20	24
5	Short questions	15	18
		100	120

[TURN OVER]

THE FOLLOWING INFORMATION MUST BE USED FOR ANSWERING QUESTIONS 1 TO 3 IN CONJUNCTION WITH THE ADDITIONAL INFORMATION THAT RELATES TO THE SPECIFIC QUESTION:

THE TYRE AND RUBBER COMPANY LIMITED

The Tyre and Rubber Company Limited is a company that trades in the tyre industry. The following information is available on 28 February 2015:

Statement of comprehensive income for the year ending 28 February 2015

		2015 Rand	2014 Rand
Turnover	Note 2	8 500 000	7 850 000
Cost of sales		3 850 000	3 600 000
Opening inventory		850 000	1 200 000
Purchases	3	4 200 000	3 250 000
		(1 200 000)	(850 000)
Closing inventory			
Gross profit		4 650 000	4 250 000
		(3 200 000)	
Operating expenses		000)	(2 180 000)
Operating profit		1 450 000	2 070 000
Dividends received		500 000	420 000
Finance charges (net)		(118 000)	(98 000)
Impairment loss on goodwill		(100 000)	-
Profit before taxation		1 732 000	2 392 000
Taxation		(372 960)	(552 160)
Profit after taxation		1 359 040	1 839 840
Extraordinary item	1	(20 000)	-
Profit for the year		1 339 040	1 839 840
Attributable to			
Preference shareholders		300 500	600 000
Ordinary shareholders		800 000	950 000
Non-controlling interest in subsidiaries		238 540	289 840
		1 339 040	1 839 840

THE TYRE AND RUBBER COMPANY LIMITED (continued)

Statement of financial position on 28 February 2015

	Note	2015 Rand	2014 Rand
Assets			
Non-current assets		3 120 500	3 480 500
Property, plant and equipment	1	1 250 000	1 550 000
Goodwill		450 000	550 000
Investments in associates		850 500	850 500
Long-term financial assets		570 000	530 000
Current assets		2 698 000	2 150 000
Inventory		1 200 000	850 000
Trade receivables		1 048 000	980 000
Cash balances and investments		450 000	320 000
Total assets		5 818 500	5 630 500
Equity and liabilities			
Equity		2 525 000	2 325 000
Ordinary share capital (800 000 ordinary shares)		1 600 000	1 600 000
Non-controlling interests		250 000	250 000
Accumulated reserves		175 000	125 000
Retained income		500 000	350 000
Non-current liabilities		2 442 000	2 558 000
Long-term loan		950 000	1 200 000
Debentures		12 000	8 000
Preference shares (250 000 preference shares)		1 000 000	1 000 000
Deferred taxation		480 000	350 000
Current liabilities		851 500	747 500
Trade payables		350 000	425 000
Short-term debt		501 500	322 500
Total equity and liabilities		5 818 500	5 630 500

QUESTION 1 (25 marks; 30 minutes)

THE TYRE AND RUBBER COMPANY LIMITED

Additional information applicable to question 1

1. The extraordinary item relates to expert valuation costs incurred during the year in order to write down the value of goodwill.
2. Credit sales increased from 55% of turnover in 2014 to 65% of turnover in 2015.
3. In 2015, 40% of the company's purchases were made on credit in comparison to 50% in 2014.
4. Credit terms for the debtors of the company are 60 days from invoice date and for the standard industry terms are between 45 and 60 days.
5. The company's payment terms to creditors are between 45 and 60 days from invoice date, and discount of 10% is received if payment is made before 45 days. Standard payment terms for the industry are 60 days from invoice date.
6. The average stock turnover period for the industry is 90 days and the average business cycle for the industry is 100 days.
7. All raw materials are purchased on the just-in-time (JIT) basis. The inventory in the statement of financial position consists of finished goods only.
8. VAT is levied at 14% and the company's tax rate is 28%. You may also assume there are 365 days in a year.

REQUIRED

- (a) **Calculate** the following ratios for The Tyre and Rubber Company Limited for the year 2015. (**Round off** your final answer to the nearest two decimal places.)
 - (i) Return on assets (ROA) (3)
 - (ii) Return on equity (ROE) (3)
 - (b) **Calculate** the financial leverage effect of The Tyre and Rubber Company Limited for the year 2015 and **explain** the meaning of the term "financial leverage" in this specific scenario. (4)
 - (c) **Calculate** the business cycle of The Tyre and Rubber Company Limited for year 2015 in days and **comment** on the performance of each subsection of the calculation included in line with the additional information. (**Round off** your answers to two decimal places.) (15)
- [25]**

QUESTION 2 (10 marks; 12 minutes)

THE TYRE AND RUBBER COMPANY LIMITED

Additional information applicable to question 2

Sales and Accounts receivable

- The Tyre and Rubber Company Limited has decided to offer customers paying cash a 10% discount. If customers buy on credit and pay within 45 days, they will receive a 5% discount.
- Sales increased during the last year, as the company signed a contract with a major car manufacturer to supply all the tyres for its new cars. The contract will end in five years' time.
- Furthermore, The Tyre and Rubber Company Limited has recently been appointed as the supplier of choice for all the major insurance companies. The new tollgates increased traffic on the country's secondary roads, resulting in more potholes. Subsequently, insurance companies are experiencing an all-time high in insurance claims for tyres. The insurance companies pay cash for these claims.

Purchases and Accounts payable

- The company's current payment terms to creditors are between 45 and 60 days. It is clear that the company is not taking advantage of the benefit of early settlement discounts offered to it. The financial manager decided to revisit the company's strategy for its creditor payments. A decision was taken to reduce creditor payment terms to 45 days from invoice date in order to take advantage of the benefit of the settlement discount.

Inventory

- A new industrial engineer was appointed in order to reassess the company's stock turnover period. He established the reason for the time lag as being new, inexperienced staff members recently employed in the manufacturing division.
- Transport companies are experiencing backlogs due to recent floods, making some areas inaccessible. This leads to a longer turnaround time for collection of finished goods at the company's warehouse and distribution thereof to sales outlets.
- The manufacturing plant still uses old technology that does not enable sufficient workflow due to long setups and throughput times.
- Finished goods are transported from the plant to the warehouse, from where it is then distributed to various outlets.
- The Tyre and Rubber Company Limited stores its inventory at a third party's warehouse. The warehouse is situated in an industrial area known for its high crime statistics. There have been incidents in the past of burglaries at the warehouse. The warehouse is located approximately 100 kilometres away from the company's major outlets. A monthly storage fee is charged based on floor space used to store the inventory. The larger the stock holding, the bigger the floor space needed and the higher the storage fee will be.

QUESTION 2 (continued)

REQUIRED

Discuss the impact of the additional information provided on the company's business cycle. **Explain** if it will affect the business cycle positively or negatively and **support** your answer with a proper reason. The impact on the business cycle should be discussed under the following three headings:

- (a) Debtors collection period (3)
 - (b) Creditors payment period (3)
 - (c) Stock turnover period (4)
- [10]**

Use the following format when preparing your answer:

Business cycle component	Increase/decrease of the business cycle days	Reason for increase/decrease
(a) Debtors collection period		
(b) Creditors payment period		
(c) Stock turnover period		

QUESTION 3 (30 marks; 36 minutes)

THE TYRE AND RUBBER COMPANY LIMITED

Additional information applicable to question 3

The Tyre and Rubber Company Limited needs to upgrade its manufacturing machinery due to normal wear and tear. One of its largest machines will soon need to be refurbished.

The company is considering two options:

- (i) Refurbish and keep the existing machine.
- (ii) Replace the existing machine with a new one. This new machine uses advanced technology and will reduce labour hours significantly. It is also likely that the new machine will use less electricity than the existing machine.

The following information is relevant:

	New machine	Existing machine
Current tax value		R333 333
Cost price	R1 200 000	R1 000 000
Cost of refurbishment		R800 000
Current realisable value		R400 000
Realisable value after 3 years	R500 000	R300 000
Working capital requirement (additional)	R80 000	R60 000
Units manufactured by the machine per annum (100% production)	30 000	25 000
Production capacity (units per annum)	20 000	20 000
Fixed manufacturing cost per annum	R150 000	R200 000
Variable cost per unit manufactured	R300	R320
Sales price per unit manufactured	R800	R800

Additional information

- SARS allows for wear and tear over three years.
- Depreciation is not included in the variable cost.
- The company uses a target weighted average cost of capital (WACC) of 16%.
- The lifespan of both assets is three years.
- The target debt/equity ratio is 50:50.
- The current tax rate is 28%.

QUESTION 3 (continued)

REQUIRED

Round off all your answers to the nearest rand.

- (a) **Advise** whether management should refurbish and continue using the existing machine or replace the existing machine with the new one using the net present value method. (20)
- (b) **Discuss** and **recommend** to management how the new machine should be financed, assuming that management decide to purchase the new machine. Base your discussion on relevant calculations supporting your recommendation. Show all calculations. (6)
- (c) **Discuss** four qualitative factors that management should consider when making their investment decision. (4)

[30]

QUESTION 4 (20 marks; 24 minutes)

Ice Cool (Pty) Limited is a manufacturing company that manufactures a wide range of freezers and fridges. Ice Cool (Pty) Limited wants to expand their product range and is negotiating with Clear Air (Pty) Limited which manufactures air-conditioning units. Ice Cool (Pty) Limited wants to acquire 100% of the shares in Clear Air (Pty) Limited and believes that valuable synergies exist between the two companies. The following information in respect of Clear Air (Pty) Limited is relevant:

Clear Air (Pty) Limited

Abridged statement of comprehensive income for the year ending 31 December 2014

	Note	2014 Rand
Turnover		850 000
		685 000
<u>Less:</u> Raw material – purchased from supplier A	1	180 000
Raw material – purchased from supplier B	1	100 000
Labour costs – manufacturing	2	250 000
Depreciation: Manufacturing equipment	3	80 000
Marketing cost	4	45 000
Share of head office costs		30 000
Net profit		165 000

QUESTION 4 (continued)

Notes

1. The directors of Ice Cool (Pty) Limited have just entered into an agreement with supplier A for material and components at 75% of the cost that Clear Air (Pty) Limited is currently paying. Raw materials purchased from supplier B will cost Ice Cool (Pty) Limited 10% more than what Clear Air (Pty) Limited is currently paying.
2. Ice Cool (Pty) Limited's employee salaries fall within a larger salary band than that of Clear Air (Pty) Limited's employee salaries. In order to facilitate a salary adjustment, the labour costs for manufacturing will increase by 15%.
3. Depreciation is calculated at 20% per annum on the manufacturing machine. All assets will be taken over by Ice Cool (Pty) Limited.
4. Ice Cool (Pty) Limited has its own marketing division within the company, and projections by the head of marketing show that the total cost will be 80% of what Clear Air (Pty) Limited is currently paying.

Additional information

- Ice Cool (Pty) Limited has an old piece of manufacturing equipment that will be sold immediately after acquisition. It would be sold for R20 000.
- The total annual cash flow upon acquisition will occur for the indefinite future. We can therefore assume that the annual cash flow will occur to infinity.
- Ice Cool (Pty) Limited requires a fair rate of return of 20% per annum on new investments.
- It is expected that all items of cost and revenue for the division would increase at 14% per annum.
- Ignore the effects of taxation.

REQUIRED

Draft a report to the directors of Ice Cool (Pty) Limited and give your opinion on the following:

- (a) **Give you opinion** on what the maximum purchase price should be for the acquisition of Clear Air (Pty) Limited. **Support** your opinion with relevant calculations and provide reasons for your answer. (15)
 - (b) **Discuss** non-financial factors that should also play a role in the negotiation of the final purchase price. (5)
- [20]

QUESTION 5 (15 marks; 18 minutes)

This question consists of three independent questions, namely 5.1, 5.2 and 5.3.

- 5.1 A local fashion designer imports exclusive fabrics from Italy to make evening gowns. The last order was placed on 10 March 2015 to the value of 15 000 Euro. The fabric was loaded onto a container ship and was shipped on 17 March 2015. It was delivered to the Richards Bay terminal on 25 March 2015. The payment terms are 30 days from shipment day and the shipping terms are free on board (FOB).

The following rates are available:

Date	Bank selling rate	Bank buying rate
10 March 2015	14,0230	14,0136
17 March 2015	14,0560	14,0459
25 March 2015	14,0780	14,0680
16 April 2015	14,1202	14,0986

REQUIRED

- (a) **Calculate** the rand value of the foreign currency gain/loss for the transaction. (4)
- (b) **Calculate** the mid-rate on 17 March 2015. (2)

- 5.2 Plumbworx Limited currently has a bank loan to the amount of R1 200 000, payable in three years' time. To manage their interest rate risk, management place high priority on mitigating controls. Due to the latest increase in the prime interest rate, management have decided that it would be to their benefit to enter into a forward rate agreement (FRA) at 9% over the next 12 months on 1 March 2015. Interest is payable annually at a rate of prime plus 1%. The current prime interest rate is 10%.

REQUIRED

Discuss the effectiveness of the management decision to enter into a FRA on 28 February 2015 if the prime interest rate increases to 10,5%. Support your discussion with detailed calculations and show all calculations. (6)

- 5.3 **Discuss** three reasons why mergers sometimes fail. (3)

[15]
[100]