UNIVERSITY EXAMINATIONS

UNIVERSITEITSEKSAMENS

UNISA university of south africa

MAC3702
ACN3084

May/June 2014

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 12 pages, as well as tables A and B.

PLEASE NOTE:

1. This paper consists of THREE (3) questions, as well as the following tables:
   (i) Table A - Present value of R1 after *n* years.
   (ii) Table B - Present value of R1 per annum for *n* years.
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: (10% of the average mark obtained for the first three assignments) + (90% 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
1A	Ratio analysis	20	24
1B	Weighted Average Cost of Capital (WACC)	20	24
1C	Capital budgeting	25	30
1D	Sources of funding	5	6
2	Working capital	15	18
3	Short questions	15	18
		100	120

QUESTION 1 (70 marks; 84 minutes)

This question consists of part A to part D.

PART A (20 marks; 24 minutes)

Fast and Furious Transport (Pty) Ltd

Fast and Furious Transport (Pty) Ltd is a transport company that specialises in the transport of retail products for retailers.

The following financial information is available for Fast and Furious Transport (Pty) Ltd:

Statement of financial position at 31 December 2x13

	2x13 R'000
Assets	
Non-current assets	**387 614**
Property, plant and equipment	304 519
Goodwill	2 157
Investments in associates	5 408
Other financial assets	75 530
Current assets	**349 563**
Inventory	169 694
Trade and other receivables	168 085
Prepayments	1 512
Cash and cash equivalents	10 272
Total Assets	**737 177**
Equity and Liabilities	
Total equity	**349 138**
Ordinary share capital (1 000 000 ordinary shares)	75 000
Non distributable reserve	53 095
Retained income	221 043

QUESTION 1 (continued)

Statement of financial position at 31 December 2x13 (continued)

	2x13 R'000
Total liabilities	**388 039**
Non-current liabilities	**144 938**
Long term loans	89 156
Debentures	15 000
Preference shares (500 000 preference shares)	25 000
Deferred tax	15 782
Current liabilities	**243 101**
Trade payables	187 071
Other payables	29 610
SARS	26 420
Total equity and liabilities	**737 177**

Statement of profit or loss and other comprehensive income for the year ended 31 December 2x13

	2x13 R'000
Turnover	1 149 808
Cost of sales	(287 658)
Gross profit	862 150
Operating cost	(740 566)
Operating profit before other income, interest and tax	121 584
Other income	7 510
Earnings before interest and tax	129 094
Finance cost	(13 628)
Earnings after interest before tax	115 466
Income tax expense	(33 916)
Profit for the year	**81 550**
Operating profit includes depreciation totalling	18 730

QUESTION 1 (continued)

Additional information

- In the previous financial year the company decided to issue an additional 200 000 ordinary shares to improve the debt to equity ratio.
- The company is also monitoring the debt to equity ratio closely as the interest rates on debt is the lowest in the past five years.
- The "Economist" published an article where they predict that the bank lending rate will increase in early 2x14.
- The following are industry averages:

Current ratio	2 : 1
ACID ratio	1 : 1
Debt ratio	45%
Debt to equity ratio	67%
Interest cover (TIE)	7,5
Gearing ratio	40%
Return on assets	17,25%
Return on operating assets	18,75%
Net profit percentage	15%
Gross profit percentage	70%

REQUIRED:

(a) Calculate the following ratios for Fast and Furious Transport (Pty) Ltd for the year 2x13: (Round your answer to the nearest two decimal places.)
   (i) debt management ratios
   (ii) gearing ratio (14)

(b) Comment on the significance of the ratios calculated in (a) in comparison to the averages for the industry. (6)

[20]

MAC3702
May / June 2014

QUESTION 1 (continued)

PART B (20 marks; 24 minutes)

Fast and Furious Transport (Pty) Ltd

Use the same set of financial information as set out in PART A and consider the following additional information.

Additional information

Current capital structure:

- Ordinary shares currently trade at a market value of R400 each, and cost of equity is 20%.
- The preference shares have no conversion rights and carry a dividend pay-out of 11%. Similar preference shares are currently trading at 10%.
- The debentures mature in 5 years' time at a premium of 10%. The debentures carry an interest rate of 12.5%. Similar debentures are trading at 11.11% before tax.
- The long term loan matures in 8 years' time and carries an interest of 15%. The current long-term interest rate for a similar loan is 16.67%.
- Trade creditors are normally paid in full within the normal credit period without any interest being paid or discount received. Short-term credit is not part of the long-term financing structure of the company.
- The bank overdraft rate is 18%.
- The current tax rate is 28%.

REQUIRED:

(a) Calculate the weighted average cost of capital (WACC) based on the current capital structure for 2x13 based on market values.
(Round your calculations and answer to the nearest rand and full percentage.) (20)

CUNIS10ACN30841N1000000011520

QUESTION 1 (continued)

PART C (25 marks; 30 minutes)

Fast and Furious Transport (Pty) Ltd

The management team has decided to expand their current service offering into the public transport sector. With the new toll fees that will be charged, less people will be able to afford the trip in their private vehicles between Pretoria and Johannesburg. Many people can also not afford the Gautrain fees and there are very few alternatives.

The operational manager is currently investigating two mutually exclusive investment possibilities:

Project A Purchase 100 new 65 seater buses at a cost of R85 000 000

Project B Purchase 100 second hand 65 seater buses at a cost of R49 750 000

The table below includes more information relating to the two projects:

	Project A	**Project B**
Current tax value	R100 000	R48 000 000
Cost price	R85 000 000	R49 750 000
Realisable value after 5 years	R15 000 000	
Realisable value after 3 years		R9 500 000
Working capital in year 1	R100 000	R80 000
Income from buses	R64 500 000	R64 500 000
Fixed cost per annum	R20 000 000	R20 000 000
Variable cost per annum	R15 000 000	R21 000 000
Net present value	?	R907 880

Additional information

- Depreciation is not included in the fixed cost. SARS allows for wear and tear over five years on new vehicles and three years on the used vehicles.
- You can assume that the WACC for this project is equal to 18%.
- The current tax rate is 28%.

QUESTION 1 (continued)

General information

The new buses were manufactured based on newer technology and only uses diesel of 50ppm or lower to minimise the CO_2 emissions.

The company is currently looking at effective ways to manage its carbon footprint that directly impacts their reputational risk. Sustainable investments are a big strategic focus point for the directors in the next four years.

REQUIRED:

Prepare a memorandum where you advise management:

(a) Whether they should invest in any of these two projects by making use of the net present value (NPV) calculation (show your workings). (10)

(b) Which project they should invest in if applicable (show your workings). (4)

(c) Discuss some qualitative and environmental impact factors that management should consider when they make their investment decision. (7)

(d) Discuss some of the shortcomings when using the NPV method for capital budgeting. (4)

[25]

QUESTION 1 (continued)

PART D (5 marks; 6 minutes)

Fast and Furious Transport (Pty) Ltd

Consider the following two financing options for the capital expansion as discussed in **PART C** of the question:

(1) 19% Convertible preference shares

(2) Bonds with a coupon rate of 16%

REQUIRED:

Discuss which financing option you would recommend to management and why you choose the specific option.

(5)

[70]

QUESTION 2 (15 marks; 18 minutes)

Izak Plumbers (Pty) Ltd

Izak Plumbers (Pty) Ltd is a company that distributes plumbing parts to industrial developers. The following information relates to the current and other aspects of the company's business:

Sales and receivables

(i) Sales for the year amounted to R15 750 000.
(ii) A 2% discount was offered to debtors that paid within 10 days.
(iii) Bad debt provision for the current year amounted to 3% of credit sales.
(iv) Currently, 40% of debtors pay within 10 days, while the remaining debtors take 30 days on average to settle their accounts.

As many of the clients cannot afford to settle their accounts within the credit terms due to the current economic circumstances, the company decided to make changes to the current credit policy. The financial manager proposes to grant credit on 5/10 (5% discount for payment within 10 days) net 45 basis in future. The financial manager anticipates that 70% of current debtors will now make use of this option, whilst the remaining current debtors will pay within 45 days on average. Bad debt provision for existing customers will remain the same.

The following assumptions were also included in the proposal:

(i) Sales will increase with R1 500 000 due to new customers.
(ii) 65% of new customers will pay within the discount period, while the remaining new customers will pay within 60 days.
(iii) The increase in sales is expected to result in a R950 000 increase in inventory, and trade payables are likely to increase with R500 000.
(iv) Bad debt will increase with R50 000 as a result of the new sales.

QUESTION 2 (continued)

Purchases and payables

Izak Plumbers (Pty) Ltd purchases inventory in terms of a 3/10 net 30 days policy. The company does not pay within 10 days and therefore does not receive any discount. Management is of the opinion that they will not make use of the discount and that they should consider to delay the payment of creditors even further by only paying within 45 days in order to finance any additional working capital requirements.

General information

(i) All sales are on credit.
(ii) The contribution ratio is determined at 35%.
(iii) The applicable tax rate is 28%, and WACC is equal to 20%.
(iv) Assume there are 365 days in a year.

REQUIRED:

(a) Determine the impact of the new credit policy on the company's profitability and comment whether the company should accept the new credit policy by means of the annual after-tax cash flow calculations. (10)

(b) Calculate the effective cost of creditor financing if you accept the proposal by management in the following circumstances:
(i) the current payment practice stays intact; and
(ii) the payment is delayed to 45 days. (5)

[15]

QUESTION 3 (15 marks; 18 minutes)

This question consists of three questions, each question must be considered independently.

3.1 The following information is available in the South African currency market on 30 November 20X3.

	ZAR/£1
Spot rate	R16,5404/£
South African (borrowing) interest rate	9,0 % per annum
United Kingdom (borrowing) interest rate	1,5 % per annum
South African inflation rate	6,8% per annum
United Kingdom inflation rate	2,5% per annum

Assume there are 360 days in a year.

REQUIRED:

(a) Use the interest rate parity principle to determine the 90-day forward rate. (Round your answer to the nearest four decimals.) (4)

(b) Use the purchasing power parity theory and determine the forward rate for 30 November 20X5 (Round your answer to the nearest four decimals.) (4)

3.2 Chiefs Ltd's shares are currently trading at R125 each. The company proposes a net cash dividend of R2,75 per share held or scrip dividends to all shareholders holding 100 shares or more on the basis of 2,5 shares for every R275 of cash dividends or 100 shares held.

Fractions of shares will be converted to cash credits held on behalf of shareholders.

If a shareholder holds 5 500 shares in Chiefs Ltd, how many shares will he or she be entitled to if he or she chooses the option of scrip dividends instead of a cash dividend?

(3)

QUESTION 3 (continued)

3.3 Brian successfully tendered for R2 500 000 in treasury bills on 29/10/2013. The price of his investment was R2 400 000. Market discount rates over the 91 day period to maturity were as follows:

29/10/2013	15,45%
29/11/2013	17,30%
29/12/2013	18,90%

Assume there are 365 days in a year.

REQUIRED:

Calculate the effective yield of the investment if Brian holds the investment until maturity.

(4)

[15]

TABEL A / TABEL A

PRESENT VALUE OF R1 AFTER N YEARS / TEENSWOORDIGE WAARDE VAN R1 NA N JAAR

Jaar/ Year N	1%	2%	4%	6%	8%	10%	12%	14%	15%	16%	18%	20%	22%	24%	25%	26%	28%	30%	35%
1	0,990	0,980	0,962	0,943	0,926	0,909	0,893	0,877	0,870	0,862	0,847	0,833	0,820	0,806	0,800	0,794	0,781	0,769	0,741
2	0,980	0,961	0,925	0,890	0,857	0,826	0,797	0,769	0,756	0,743	0,718	0,694	0,672	0,650	0,640	0,630	0,610	0,592	0,549
3	0,971	0,942	0,889	0,840	0,794	0,751	0,712	0,675	0,658	0,641	0,609	0,579	0,551	0,524	0,512	0,500	0,477	0,455	0,406
4	0,961	0,924	0,855	0,792	0,735	0,683	0,636	0,592	0,572	0,552	0,516	0,482	0,451	0,423	0,410	0,397	0,373	0,350	0,301
5	0,951	0,906	0,822	0,747	0,681	0,621	0,567	0,519	0,497	0,476	0,437	0,402	0,370	0,341	0,328	0,315	0,291	0,269	0,223
6	0,942	0,888	0,790	0,705	0,630	0,564	0,507	0,456	0,432	0,410	0,370	0,335	0,303	0,275	0,262	0,250	0,227	0,207	0,165
7	0,933	0,871	0,760	0,665	0,583	0,513	0,452	0,400	0,376	0,354	0,314	0,279	0,249	0,222	0,210	0,198	0,178	0,159	0,122
8	0,923	0,853	0,731	0,627	0,540	0,467	0,404	0,351	0,327	0,305	0,266	0,233	0,204	0,179	0,168	0,157	0,139	0,123	0,091
9	0,914	0,837	0,703	0,592	0,500	0,424	0,361	0,308	0,284	0,263	0,225	0,194	0,167	0,144	0,134	0,125	0,108	0,094	0,067
10	0,905	0,820	0,676	0,558	0,463	0,386	0,322	0,270	0,247	0,227	0,191	0,162	0,137	0,116	0,107	0,099	0,085	0,073	0,050
11	0,896	0,804	0,650	0,527	0,429	0,350	0,287	0,237	0,215	0,195	0,162	0,135	0,112	0,094	0,086	0,079	0,066	0,056	0,037
12	0,887	0,788	0,625	0,497	0,397	0,319	0,257	0,208	0,187	0,168	0,137	0,112	0,092	0,076	0,069	0,062	0,052	0,043	0,027
13	0,879	0,773	0,601	0,469	0,368	0,290	0,229	0,182	0,163	0,145	0,116	0,093	0,075	0,061	0,055	0,050	0,040	0,033	0,020
14	0,870	0,758	0,577	0,442	0,340	0,263	0,205	0,160	0,141	0,125	0,099	0,078	0,062	0,049	0,044	0,039	0,032	0,025	0,015
15	0,861	0,743	0,555	0,417	0,315	0,239	0,183	0,140	0,123	0,108	0,084	0,065	0,051	0,040	0,035	0,031	0,025	0,020	0,011
16	0,853	0,728	0,534	0,394	0,292	0,218	0,163	0,123	0,107	0,093	0,071	0,054	0,042	0,032	0,028	0,025	0,019	0,015	0,008
17	0,844	0,714	0,513	0,371	0,270	0,198	0,146	0,108	0,093	0,080	0,060	0,045	0,034	0,026	0,023	0,020	0,015	0,012	0,006
18	0,836	0,700	0,494	0,350	0,250	0,180	0,130	0,095	0,081	0,069	0,051	0,038	0,028	0,021	0,018	0,016	0,012	0,009	0,005
19	0,828	0,686	0,475	0,331	0,232	0,164	0,116	0,083	0,070	0,060	0,043	0,031	0,023	0,017	0,014	0,012	0,009	0,007	0,003
20	0,820	0,673	0,456	0,312	0,215	0,149	0,104	0,073	0,061	0,051	0,037	0,026	0,019	0,014	0,012	0,010	0,007	0,005	0,002
21	0,811	0,660	0,439	0,294	0,199	0,135	0,093	0,064	0,053	0,044	0,031	0,022	0,015	0,011	0,009	0,008	0,006	0,004	0,002
22	0,803	0,647	0,422	0,268	0,184	0,123	0,083	0,056	0,046	0,038	0,026	0,018	0,013	0,009	0,007	0,006	0,004	0,003	0,001
23	0,795	0,634	0,406	0,262	0,170	0,112	0,074	0,049	0,040	0,033	0,022	0,015	0,010	0,007	0,006	0,005	0,003	0,002	0,001
24	0,788	0,622	0,390	0,247	0,158	0,102	0,066	0,043	0,035	0,028	0,019	0,013	0,008	0,006	0,005	0,004	0,003	0,002	0,001
25	0,780	0,610	0,375	0,233	0,146	0,092	0,059	0,038	0,030	0,024	0,016	0,010	0,007	0,005	0,004	0,003	0,002	0,001	0,001
26	0,772	0,598	0,361	0,220	0,135	0,084	0,053	0,033	0,026	0,021	0,014	0,009	0,006	0,004	0,003	0,002	0,002	0,001	
27	0,764	0,586	0,347	0,207	0,125	0,076	0,047	0,029	0,023	0,018	0,011	0,007	0,005	0,003	0,002	0,002	0,001	0,001	
28	0,757	0,574	0,333	0,196	0,116	0,069	0,042	0,026	0,020	0,016	0,010	0,006	0,004	0,002	0,002	0,002	0,001	0,001	
29	0,749	0,563	0,321	0,185	0,107	0,063	0,037	0,022	0,017	0,014	0,008	0,005	0,003	0,002	0,001	0,001	0,001		
30	0,742	0,552	0,308	0,174	0,099	0,057	0,033	0,020	0,015	0,012	0,007	0,004	0,003	0,002	0,001	0,001			
40	0,672	0,453	0,208	0,097	0,046	0,022	0,011	0,005	0,004	0,003	0,001	0,001							
50	0,608	0,372	0,141	0,054	0,021	0,009	0,003	0,001	0,001	0,001									