

QUESTION BANK 01/2017

QUESTIONS

APPLICATION OF FINANCIAL MANAGEMENT TECHNIQUES

MAC3702

Semester 2

Department of Management Accounting

IMPORTANT INFORMATION

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Note: This is an online module and therefore it is available on myUnisa. However, in order to support you in your learning process, you will also receive some study material in printed format.

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QUESTION 01: SANRAL (20 MARKS)**CAPITAL BUDGETING**

After the successful hosting of the 2010 FIFA World Cup® and successful launching of the e-toll system in Gauteng, the Western Cape Provincial Government (WCG) is following suit. The City of Cape Town has won a bid to host Olympics 2024 and the WCG has started reviewing its infrastructure with the view of making necessary upgrades.

South African National Roads Agency Limited (SANRAL) is responsible for the road infrastructure throughout the country and has been given a mandate to improve major road networks in the Western Cape in preparation for the Olympics games in 2024. The Department of Transport and Public Works has made it clear that it would not allocate any funds to the upgrade.

SANRAL is considering two alternatives for recovering the capital outlay on the road infrastructure over the next five years. SANRAL can either use the e-toll system or the fuel levy system.

Alternative 1: e-toll system

How it works: Gantries are constructed at different points on major roads around the Western Cape. As a motor vehicle passes through a gantry, the car registration details are read electronically and the information is passed directly to the control centre in Paarl where the amount owed (toll fee) for passing that gantry is established. This is immediately sent to the motor vehicle owner's bank, instructing the bank to debit the owner's account with the toll fee. All Western Cape car owners are required to register with SANRAL. Visitors to the Western Cape Province also need to register at any of the leading retailers in the province. A customer centre will be established to attend to general road user queries, unpaid toll fees, unregistered motor vehicles.

Alternative 2: Fuel levy system

How it works: No e-toll infrastructure will be put in place but a special levy will be charged to the fuel price, meaning that the retail price of fuel (across all grades) will be increased at all fuel stations across the country. This levy is then electronically transferred to SANRAL's account as fuel is purchased. Only the levy collected in the Western Cape will be used for the Western Cape infrastructure development.

SANRAL has estimated capital expenditure (CAPEX) at the start of the project, where applicable to be as follows:

CAPEX	R
Roads	17 884 002
Gantries (civil works)	393 867
e-toll IT systems	1 837 480
Control centre – Paarl	229 756
Customer centre	217 217
IT Systems - fuel levy	5 545 682

Running of the e-toll system

SANRAL expects 2 300 000 cars to go through the gantries per annum at an average toll fee of R3,60 (which will not change) per car. About 30% of the cars passing the gantries will not register for e-toll, making it impossible to recover amount owed by the unregistered users. The toll revenue is expected to grow in line with inflation and increase in number of cars annually.

Electronic Tolling Collection Company has provisionally been awarded R6 500 000 tender to manage the collection of toll fees and this is paid annually in arrears in equal instalments over the next five years. Working capital of R1 677 123 is required at the start of the project.

Running of the fuel levy system

SANRAL will charge a fixed fuel levy of 55c per litre for the next five years. South African road users currently consume 35 000 000 litres of fuel per annum, of which the Western Cape will consume 30% (this ratio will apply for the duration of the project). Annual consumption of fuel will increase in line with increase in number of road users.

SANRAL has estimated the initial working capital of R234 187. Operating costs are budgeted at R650 000 per annum.

Additional information:

National Association of Automobile Manufacturers of South Africa (NAAMSA) expects the Western Cape road users to increase at a steady annual rate of 6% for the duration of the project. SANRAL is exempt from Income Tax in terms of s 10(1)(t)(iii) of the Income Tax Act. The WACC is calculated using the RSA government bond rate of 7% before tax

REQUIRED

- a) Using NPV calculation, **determine** which system SANRAL should use to recover the capital outlay.

[20]

QUESTION 02: FAST AND FURIOUS (20 marks)**WEIGHTED AVERAGE COST OF CAPITAL**

Fast and Furious Transport (Pty) Ltd is a transport company that specialises in the transport of retail products for retailers. The following is the extract from its statement of financial position at 31 December 2x13:

	2x13 R'000
Equity	349 138
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 and other payables	216 681
SARS	26 420
Total equity and liabilities	737 177

Additional information:

- One million ordinary shares are in issue and are currently trading at a market value of R400 each, and cost of equity is 20%.
- The preference shares have no conversion rights and carry a dividend payout 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% and the current tax rate is 28%.

REQUIRED

- Calculate** the weighted average cost of capital (WACC) based on the current capital structure for 2x13 based on market values.

[20]

QUESTION 03: DRESSED FOR SUCCESS (30 marks)**FINANCIAL ANALYSIS**

Dressed For Success Limited trades in the retail clothing sector and is listed on the general retail sector of the Johannesburg Securities Exchange (JSE). The company focuses on young buyers. Their unaudited results for 31 December 2X14 are shown below:

Statement of comprehensive income for the year ended 31 December 2X14

	2X14	2X13
	R'000	R'000
Turnover	908 191	814 521
Cost of sales	(563 078)	(553 874)
Opening inventory	120 000	198 000
Purchases	657 078	475 874
Less: Closing inventory	(214 000)	(120 000)
Gross profit	345 113	260 647
Operating expenses	(187 634)	(125 340)
Operating profit before other income, interest and tax	157 479	135 307
Finance charges (net)	(23 547)	(18 712)
Profit after interest before tax	133 932	116 595
Tax	(37 500)	(32 647)
Profit after tax	96 432	83 948

Statement of financial position at 31 December 2X14

	2X14	2X13
	R'000	R'000
ASSETS		
Non- current assets	330 187	314 124
Current assets	462 434	261 033
Inventory	214 000	120 000
Trade receivables	89 669	45 421
Cash balances and investments	158 765	95 612
Total Assets	792 621	575 157
EQUITY AND LIABILITIES		
Equity	343 876	294 876
Ordinary share capital (82 million ordinary shares at R1 each)	82 000	82 000
Accumulated reserves	261 876	212 876
Non-current liabilities	188 386	111 579
Long term loan	188 386	111 579
Current liabilities	260 359	168 702
Trade payables	185 269	140 174
Accruals and provisions	75 090	28 528
Total equity and liabilities	792 621	575 157

Financial ratios of Dressed For Success Limited

	Ratio	2X13	2X14
(i)	Gross profit percentage	32%	?
(ii)	Net operating profit percentage	16,6%	?
(iii)	Change in turnover	10,3%	?
(iv)	Return on assets	23,5%	?
(v)	Return on equity	28,5%	?
(vi)	Debtors collection period	29,1 days	?
(vii)	Inventory turnover	4,6 times	?
(viii)	Debt equity ratio	37,8 : 1	?
(ix)	Cash ratio	0,57 : 1	?

Additional information:

- The company launched a new exclusive clothing brand at the beginning of 2X14 which is very popular amongst most teenagers.
- The annual sales occurred evenly throughout the year. Of the turnover in 2014, 65% was credit sales. This represents a slight decrease from the 70% credit sales in 2X13. The financial manager has reviewed the company's credit sales policy and intends to decrease credit sales to 55% of turnover from 2X15 onwards.
- All inventories are purchased on credit. A substantial part of the new clothing brand is imported from China. This inventory is ordered in large quantities to save on shipping costs. The budgeted turnover of the company is R1 089 829 000 for 2X15.
- There are 365 days in a year and the company tax rate is 28%.
- You may ignore the impact of VAT.

REQUIRED

- a) **Calculate** ratios (i) to (ix) for 2X14 in the table above, and **provide** possible reasons for the deterioration or improvement thereof from 2X13 to 2X14. Take the additional information into account for providing these reasons. Round your final answer to the nearest decimal place.

[30]

QUESTION 04: KGORONG (15 marks)**VALUATIONS
MERGERS & ACQUISITIONS**

The following information relates to Kgorong (Pty) Ltd:

- Latest dividend declared and paid in 2013: R 550 000
- Expected growth in dividends:

2014:	10%
2015:	15%
2016:	20%
2017 and thereafter:	25% per annum
- 28% is a fair rate of return on minority shares.

REQUIRED

- a) Calculate the value of a minority share of 10% in Kgorong (Pty) Ltd.
(12)
- b) What conditions should be met in order to obtain more reliable results when using the Gordon Dividend Growth Model to value a minority share?
(3)

[15]

QUESTION 05: FAST AND QUICK (20 marks)**VALUATIONS
MERGERS & ACQUISITIONS**

Fast Ltd made an offer to the shareholders of Quick Ltd on the basis of 4 shares in Fast Ltd for every 5 shares held in Quick Ltd. The relevant financial information based on the latest financial statements and market movements are as follows:

	Fast Ltd	Quick Ltd
Shares in issue ('000)	200 000	60 000
Earnings after tax (R'000)	840 000	168 000
Dividend pay-out ratio	30%	40%
Net asset value (R'000)	6 400 000	1 020 000
Price per share (cent)	5 124	3 920
Debt: equity ratio	2:1	0,8:1

Both companies have paid dividends consistently in the past.

REQUIRED

- What is the total number of shares that Fast Ltd will issue to the shareholders of Quick Ltd?
(2)
- What is the value placed on one Quick Ltd share as suggested by the offer of Fast Ltd?
(2)
- Advise the shareholders of Quick Ltd whether or not they should proceed with the negotiations (consider the new business value, earnings and dividends). Note any issues that they should address during the negotiation process.
(14)
- Should Fast Ltd offer an additional R1 per Quick Ltd share in cash, over and above the share exchange? Will this influence your initial recommendation?
(2)

[20]

QUESTION 06: HOTELS 365 (30 marks)**WEIGHTED AVERAGE COST OF CAPITAL**

Hotels 365 Ltd is a hotel group that operates in the Western Cape. The following is an extract of the Statement of financial position for 30 June 2X14:

	Note	Rand (million)
Equity and Liabilities		
Total equity		3 250
Shareholder's equity (20 million issued)	1	2 500
Retained earnings		750
Total liabilities		3 270
Non – current liabilities		2 200
Preference shares (5 million issued)	2	1 250
Debentures	3	850
Deferred tax		100
Current liabilities		1 070
Trade and other payables	4	550
Bank overdraft	5	500
SARS		20
Total equity and liabilities		6 520

Notes**1. Ordinary share capital**

- The number of issued shares has remained unchanged since the incorporation of the company. The first dividends were declared on 1 July 2X04 and amounted to R12,50 per share.
- Since the first year of declaration the dividends increased at a consistent growth rate and management expects that the growth rate will continue in future.
- Dividends declared on ordinary shares for 2X14 was R25 per share. The payment of the dividends are however still outstanding.
- Ordinary shares currently trade at a market value of R225 (cum div) per share.

2. Preference shares

- The non- redeemable preference shares have no conversion rights and carry out a dividend pay-out ratio of 12% per annum.
- Similar preference shares have a current market return of 10% per annum.

3. Debentures

- Debentures mature in 8 years' time at a discount of 2%. The debentures carry an interest rate of 15% (before tax) per annum. The prime interest rate decreased since and similar debentures are currently trading at a rate of 12,5% (before tax) per annum.

4. Trade and other payables

- Trade creditors are paid within the credit period without any interest charged or discount received.
- The long term financing structure does not include any credit (financing) that relates to working capital.

5. Bank overdraft

- The bank overdraft rate is 20% per annum and it forms part of the normal working capital funding.

Additional information:

2X15 expansion strategy

- The strategy for 2X15 is to expand the current service offerings to the Eastern Cape area. This expansion will amount to R540 million.
- The project will be financed in the ratio of 60% equity and 40% debt.
- R124 million of the retained earnings are available for funding of the expansion.
- The new ordinary shares will be issued at the current market value. Issue cost of 8% will apply.

Other

- The current tax rate is 28%.
- You may ignore dividend tax.
- Cost of capital is calculated based on the market values.

REQUIRED

- a) **Calculate** the weighted average cost of capital (WACC) based on the current capital structure for 2X14 by making use of the market values. (Make use of your financial calculator where applicable and include the steps on the financial calculator in your answer sheet).

[Round your calculations and answers to the nearest rand and full percentage]

(22)

- b) Briefly **explain** how the issuing cost will impact the cost of equity of the new shares.

(2)

- c) **Calculate** the number of ordinary shares which must be issued in order to finance the expansions.

(4)

- d) **List** two assumptions behind the use of a firm's current WACC as the discount rate in an investment appraisal.

(2)

[30]

QUESTION 07: SAM TOURS (15 marks)**CAPITAL BUDGETING**

Sam is in the hospitality industry and wants to take on a new business venture. He is investigating starting his own tour-operating business (trading as “Sam Tours”), which will provide customers with 4x4 safari game drives at luxury lodges in Africa. Sam will need to purchase a 4x4 to the amount of R450 000.

The following information is relevant:

Initial working capital:	R50 000
Tours expected per annum:	60
Price per person per game drive:	R250
Average number of people per game drive:	12
Yearly fixed cost, including depreciation on vehicle:	R202 500
Yearly variable cost:	R60 000

Additional information:

- Depreciation is calculated at 25% per annum on the cost price of the vehicle. The vehicle will be sold for R200 000 at the end of the venture.
- The South African Revenue Services allows a five year wear and tear on similar vehicles.
- Weighted average cost of capital (WACC) is calculated at 16%.
- The current tax rate is 28%.
- Net cash flow will increase annually at an inflation rate of 7%.

REQUIRED

- a) Advise Sam if he should invest in the new business venture (show all workings) (10)
- b) What other factors should Sam consider before taking on the business venture? (5)

[15]

QUESTION 08: MASHESHA (30 marks)**CAPITAL BUDGETING**

MASHESHA (Pty) Ltd ("MASHESHA") is a transport and logistics company, which operates a national distribution network with a large client base and utilises a rigid dispatch and prioritisation schedule. MASHESHA is currently in talks with Moya Technology Limited ("Moya"), a company that distributes prepaid airtime to wholesalers, retailers, petrol stations and end users throughout South Africa.

Moya's business model is such that it customises the delivery of prepaid airtime according to the circumstances and requirements of its clients, some of which are highlighted below:

- Moya supplies a large number of retail chain stores with prepaid airtime by sending them a file via email or electronic file transfer. The file contains PINs (personal identification number) which retailers then split and send to their various outlets.
- Prepaid airtime is supplied to smaller businesses such as corner cafes by installing mobile Point Of Sale (POS) terminals. This allows for encrypted PIN inventory of frequently used products to be delivered to and stored on the POS device. The devices are operated by the cashier and are password protected, ensuring transactions are secure. For the less structured operations mobile solutions are provided.
- Vending machines are supplied to busy supermarkets, 24 hour forecourts and hotels. These are standalone units which can be operated by the customer.

Moya had previously undertaken the delivery of prepaid airtime in-house. Moya has recently been experiencing several staffing problems and given the nature of its large, geographically dispersed customer base, Moya has been finding it difficult to keep up and has made many late deliveries over the past few months. Moya's customers are extremely unhappy and have been inundating them with complaints.

Moya has decided to outsource its distribution operations to MASHESHA in order to focus on its primary business (technological solutions for the telecommunication industry). For the delivery of prepaid airtime to its customers, Moya has proposed to pay MASHESHA a fixed monthly fee of R450 000 and an additional R75 per 100 km travelled (all amounts at today's value). In return, MASHESHA will have to pay a once off cancellation fee of R100 000 (payable immediately) in the event that MASHESHA terminates the contract before the expiration of its five year period.

In order to undertake the delivery service MASHESHA will have to purchase a fleet of delivery trucks, an upfront capital investment of R 4 800 000. These trucks are reliable and fuel efficient (requiring seven litres of fuel per 100 km for the first 3 years whilst thereafter 9 litres of fuel are required per 100km). In accordance with the delivery fleet maintenance plan, annual

maintenance costs (expected to be R 336 000 in year 1) will escalate with increasing multiples of 2% every year, as the delivery fleet increases with age and usage.

For accounting purposes MASHESHA depreciates its trucks over the useful lives determined to be four years. SARS allows a wear & tear of 20% per annum on a straight line method. The trucks will have a combined resale value of R1 200 000 at the end of five years. Total monthly salaries of the truck drivers are expected to amount to R 264 000 in the first year with a 7% annual increase thereafter. Other costs relating to the delivery fleet is expected to amount to R 65 000 per year in year one.

Additional information:

- The current tax rate of 28% is expected to be applicable for the next 5 years.
- The fees paid by Moya to MASHESHA and other costs relating to the delivery fleet are subject to an annual escalation clause of 5,9%.
- The weighted average cost of capital of MASHESHA is 15%.
- The current price of diesel amounts to R11,41/litre and average annual increases per litre are expected to be as follows:

Year 1	Year 2	Year 3	Year 4	Year 5
50c	70c	75c	80c	90c

- Based on current information and taking into account Moya's growth plans, the following represents the kilometres MASHESHA expects its fleet of delivery trucks to travel over the next 5 years:

Year 1	Year 2	Year 3	Year 4	Year 5
600 000	605 400	612 665	704 565	713 019

REQUIRED

- a) Based on the principles of capital budgeting, **advise** MASHESHA whether it will be beneficial to accept the terms of the contract proposed by Moya.
(20)
- b) **Discuss** financial factors that MASHESHA should consider before accepting the terms of the contract proposed by Moya.
(5)
- c) **Discuss** the qualitative factors that Moya should consider when deciding on whether to perform the delivery function in- house as opposed to outsourcing.
(5)

[30]

QUESTION 09: FRISCOR (20 marks)**CAPITAL BUDGETING**

Francistown Independent Suppliers Corporation (Friscor) is a stealth brewery, flying fast, under the radar. This has been true since the day we quietly opened our first ½ barrel brewery and tap room on the west side of Francistown, Botswana in 2009. The batches were small but the taste was gigantic, and word spread like wildfire.

Today, our team brews at a larger production facility on the edge of town, regularly experimenting at the tap room to satisfy our craving for new and exciting creations. We are currently in the process of building a new addition to our brewing facility - construction set to be completed as early as 2017. The addition will include a larger brewing system as well as a filling line so we can bring exquisitely hand crafted beer to our loyal customers in bottles as well as on draft. The history of Friscor lies in the dreams of tomorrow, not the pages of the past. The past is for those who rely on high volume and low value. The past is for those who duplicate rather than design. The past is for cowards. We are forward thinkers and cunning crafters, quietly building our revolution.

As part of our growth initiatives, we are planning to construct a brewing plant in Port Elizabeth, South Africa provided that the project is able to generate the required rate of return. As this is our first venture outside the borders, the investment team has been hard at work gathering industry and country data to assist the executive committee in making a sound investment decision. The following information has been provided by the investment team:

- The project is to be assessed over a period of four years and the initial capital outlay of R2 million will be financed through a 4-year loan at 8% per annum.
- The selling price per unit is R12, while the selling price inflation is expected to average 5% per year. The variable cost is R7 per unit and the variable cost inflation is 4% per year. These prices are at current price terms.

- The following units are expected to be sold:

Year 1: 250 000

Year 2: 400 000

Year 3: 500 000

Year 4: 250 000

- The fixed overhead costs are expected to be R500 000 per year (current price terms), and the fixed cost inflation is 6% per year. R200 000 per year of the fixed costs are for research and development, and have already been incurred and are being recovered by an annual charge to the project.
- Friscor can claim 25% reducing balance capital allowances on this investment. The current company tax rate is 28%. Friscor pays taxation one year in arrears at an effective rate of 30% per year. General rate of inflation is expected to be 4.7% per annum.
- The scrap value of machinery at the end of the four-year project is R250 000.
- The real weighted average cost of capital is 7%.

REQUIRED

- a) **Prepare** an investment appraisal memorandum, advising the Friscor Executive Committee whether to go ahead with the planned South African brewing plant construction.
(15)
- b) **Discuss** the qualitative factors that Friscor should consider when deciding on whether to invest in the new brewing plant.
(5)

[20]

QUESTION 10: JAZZ STUDIOS (5 marks)**CAPITAL BUDGETING**

Jazz Studios wants to invest in a project with an initial cost of R850 000. The cash flows generated by the project will be as follows:

Year 1:	R150 000
Year 2:	R200 000
Year 3:	R400 000
Year 4:	R180 000

The target weighted average cost of capital (WACC) of the company is 14%.
Cash flows are stated at current prices, and inflation is 5% per annum.

REQUIRED

- a) **Calculate** and advise whether Jazz Studios should accept or reject the project.

[5]

QUESTION 11: PICTURE PERFECT (15 marks)**CAPITAL BUDGETING**

Picture Perfect Ltd is in the printing industry and makes use of digital litho printers. The operations manager has brought it to the attention of the financial manager that one of the litho printers needs to be replaced.

	Existing printer	New printer
Current tax value	R100 000	
Cost price	R200 000	R250 000
Current realisable value	R180 000	
Realisable value after 4 years	R40 000	R60 000
Working capital	R35 000	R50 000
Sales generated by printer per annum	R350 000	R450 000
Fixed cost	R100 000	R150 000
Variable cost	R50 000	R70 000

- Depreciation is not included in the variable cost. SARS allows for wear and tear over four years.
- The cost of capital is 15%.
- The current tax rate is 28%.

REQUIRED

- a) Should Picture Perfect Ltd continue using their existing printer, or should they invest in a new one? Perform a net present value (NPV) calculation to substantiate your answer.

[Round your final answer to the nearest rand]

(12)

- b) List two qualitative factors that Picture Perfect Ltd needs to consider when evaluating whether or not to replace the existing printer.

(2)

- c) Explain the difference between mutually exclusive and independent projects.

(1)

[15]

QUESTION 12: BEAUTIFUL FACES AND INNER BEAUTY (10 marks)

VALUATIONS MERGERS & ACQUISITIONS

You are faced with the following scenario:

Two cosmetic companies, Beautiful Faces (Pty) Ltd and Inner Beauty (Pty) Ltd are currently in negotiations and want to form a new company called Beauty 100 (Pty) Ltd. The two shareholders will each own 50% of the shares in the new company. The old companies will rebrand to the new company brand. All assets and liabilities of both companies will transfer to the new company.

REQUIRED

- a) **Indicate** whether the above scenario is a takeover or a merger and give three reasons to substantiate your answer.
(4)
- b) **Give** two reasons why the two companies might consider the merger/takeover beneficial.
(2)
- c) **Give** three reasons why mergers sometimes fail.
(3)
- d) **Name** one of the body's that regulates mergers and takeovers.
(1)

[10]

QUESTION 13: TITUS AND CASSAL (10 marks)**VALUATIONS
MERGERS & ACQUISITIONS**

Titus Ltd agrees to take over the shares of Cassal Ltd in a share exchange arrangement. The following information relates to the financial position of the companies:

	Titus Ltd	Cassal Ltd
Earnings per share (EPS)	R50	R25
Market price per share	R750	R500
P/E ratio	15	20
Number of shares	10 million	7,5 million
Total earnings	R500 million	R187,5 million
Value	R7,5 billion	R3,75 billion

Titus Ltd will acquire Cassal Ltd by offering 2 shares in Titus for every 3 shares in Cassal. The directors' of Titus is of the opinion that the EPS will increase as a result of the acquisition of Cassal due to the fact that the earning of both companies will increase with 10% as a result of the synergistic benefit.

REQUIRED

- a) **Calculate** and **comment** on the EPS accruing to the shareholders of Titus and Cassal assuming that:
- The takeover results in the expected increase of 10% in total earnings and
 - The takeover does not result in the expected increase of 10% in earnings but remains constant.

(Calculations 8 marks; comments 2 marks)

[10]

QUESTION 14: TOY STARS (10 Marks)**WORKING CAPITAL**

Toy Stars Limited is a retail company that trades in the toy industry. The following information is available on 31 December 2X13:

Statement of comprehensive income for the year ending 31 December 2X13

	2X13	2X12
	Rand	Rand
Turnover	4 400 000	4 120 000
Cost of sales	3 300 000	3 200 000
Opening inventory	396 000	342 000
Purchases	3 530 000	3 254 000
Less: Closing inventory	(626 000)	(396 000)
Gross profit	1 100 000	920 000
Operating expense	(820 000)	(680 000)
Operating profit	280 000	240 000
Dividends received	5 000	5 000
Finance charges (net)	(18 000)	(8 000)
Profit before taxation	267 000	237 000
Taxation expense	(75 000)	(71 000)
Profit after taxation	192 000	166 000
Number of issued shares	700 000	700 000
Dividend (per share)	12 cents	10 cents

Statement of financial position at 31 December 2X13

	2X13	2X12
	Rand	Rand
Assets		
Non-current assets	806 000	600 000
Current assets	1 468 000	1 133 000
Inventory	626 000	396 000
Trade receivables	647 000	454 000
Cash balances and investments	195 000	283 000
Total assets	2 274 000	1 733 000
Equity and liabilities		
Equity	1 015 000	865 000
Share capital and share premium	140 000	140 000
Accumulated reserves	875 000	725 000
Non-current liabilities	107 000	60 000
Long-term loan	107 000	60 000
Current liabilities	1 152 000	808 000
Trade payables	800 000	590 000
Other payables and provisions	352 000	218 000
Total equity and liabilities	2 274 000	1 733 000

Additional information:

- 50% of the sales in 2X13 were cash sales (in 2X12 it was 60%). Management decided to extend their credit facilities and believe that it would result in future growth. The intention is to bring the percentage of cash sales down to 35% in 2X14 and to retain this percentage split between cash and credit sales in future. The budgeted turnover for 2X14 is R5 120 000. All inventory purchases are done on credit.

REQUIRED

- Calculate** the working capital required to support the increase in sales budgeted for 2X14. Show all your calculations.

(10)

QUESTION 15: CITY OF NKANDLA (25 marks)**CAPITAL BUDGETING**

The City of Nkandla has embarked on a campaign of becoming one of Africa's top tourist attractions. The City Council bought a fleet of open-top buses from a Brazilian supplier. An order of 50 identical buses was placed on 2 January 2015 at a unit cost of US \$48 000, and the buses arrived at the Durban harbour on 29 January 2015. An EFT payment was made on the 29 January 2015 and a further R5 320 000 was spent on modification of the buses. The buses were ready for use on 31 January 2015.

These 50-seater buses visit famous sites and attractions around the City of Nkandla and tourists can hop-on-and-off with a ticket that is valid for the entire day. Ticket costs R30 per adult, but children (under 12 years of age) pay a third of the ticket cost. Ticket sales are expected to grow at an average of 4% per annum over the next 5 years. Working capital requirements were budgeted at R4 000 000 at the start of the project.

The Council estimated that each bus would operate at 80% capacity throughout the year, with 1 trip scheduled per day. For every 3 adult tourists, there will be one child – the adult/child ratio and the bus capacity are constant for the duration of the project (5 years).

SA Fleet Enterprise (SAFE) was awarded a fixed contract of R20 000 000 to manage the fleet, with equal payments made annually for the next 5 years (the contract amount is after taking into account total estimated cost of running the project and spreading these costs equally over the 5 years). SAFE will be responsible for maintaining the buses, personnel management and all the operational costs of running the project.

Additional information:

- The City of Nkandla depreciates its buses over 5 years on a straight line basis and the value of buses at the end of the project is negligible.
- Weighted average cost of capital is 10%.
- The City of Nkandla is exempt from Income Tax in terms of s10(1)(c).
- Assume 250 days in operation per annum.

QUOTATIONS FROM THE BANK – Rand per USD

Date	Selling rate	Buying rate
02/01/2015	10,000	9,800
29/01/2015	10,450	10,250
31/01/2015	10,500	10,300
Month average	10,250	10,000

REQUIRED

- a) **Determine** whether you support the decision taken by the Council to invest in the project.

(16)

- b) Based on your answer above, **calculate** the project's discounted payback period.

(4)

- c) **What are the** qualitative factors that the Council would have considered before embarking on the project?

(5)

[25]

- VALUATIONS
- MERGERS & ACQUISITIONS
- FINANCIAL ANALYSIS

QUESTION 16: CURROW COLLEGE (45 marks)

(Note: Advanced calculation of Free Cash Flows – NOT required in MAC3702)

Currow College (Pty) Ltd ("Currow") owns and operates three private schools in the Gauteng province. The first school was opened in 2003 and two further schools were opened during 2008 and 2011 respectively. Currow's vision is to provide world-class education to its learners at an affordable price. Each school caters for learners from grade 0 to grade 12.

Currow is registered with the Independent Examination Board (IEB) and its grade 12 pupils write the IEB examination. Currow has consistently achieved a 100% pass rate in the IEB examinations for the past twelve years and most of its learners qualify for admission to tertiary institutions.

Given the demand for private schooling in South Africa, Currow intends to expand its presence in Gauteng and enter other provinces. Currow intends listing on the Johannesburg Stock Exchange (JSE) within the next 3 years. Education businesses listed on the JSE are currently trading on high price earnings (PE) multiples. The main aim of listing is to raise capital on attractive terms to fund future expansion. The CEO and CFO of the company have met with various potential investors in order to fund the company's expansion programme. The most promising prospect is Infinite Capital (Pty) Ltd ("Infinite"), which has offered to subscribe for new shares to the value of R30m in Currow.

The financial results and financial position of Currow for the year ended 31 March 2015 ("FY2015") are summarised in the tables below:

CURROW COLLEGE (PTY) LTD STATEMENT OF COMPREHENSIVE INCOME			
Year end: March		2015	2014
	Notes	R'000	R'000
Revenue	1	77 650	70 800
Other income	2	1 010	850
Operating expenses	3	(61 665)	(57 182)
Earnings before interest, taxation, depreciation and amortisation		16 995	14 468
Depreciation		(1 750)	(1 670)
Earnings before interest & taxation		15 245	12 798
Interest income		245	275
Finance costs	4	(5 412)	(6 121)
Profit before taxation		10 078	6 952
Taxation		(2 822)	(1 947)
Profit for the year		7 256	5 005

CURROW COLLEGE (PTY) LTD
STATEMENT OF FINANCIAL POSITION

Year end: March		2015	2014
	Notes	R'000	R'000
Non-current assets		90 250	88 500
Land		35 000	35 000
Buildings		46 550	45 000
Furniture, fittings and equipment		8 700	8 500
Current assets		7 158	7 615
Trade and other receivables		2 550	2 110
Cash and cash equivalents		4 608	5 505
Total assets		97 408	96 115
Ordinary share capital		10 000	10 000
Retained income		33 706	26 450
Total equity		43 706	36 450
Non-current liabilities			
Long-term loans	4	33 900	41 287
Current liabilities		19 802	18 378
Short term loans		7 387	6 589
Taxation		670	540
Income received in advance	5	6 870	6 899
Trade and other payables		4 875	4 350
Total equity and liabilities		97 408	96 115

Notes

1. Revenue represents tuition fees received and receivable. Details of the number of learners and average tuition fees (per annum) are summarised in the table below:

	2015	2014
Total number of enrolled learners	2 415	2 400
Average number of learners per school	805	800
Average tuition fee per learner	R 32 153	R 29 500

2. Other income represents fees charged for aftercare services provided to learners.
3. Operating expenses comprise the following:

	2015	2014
	R'000	R'000
Employee costs	50 155	46 800
Bad debts	1 080	1 062
Other operating costs	10 430	9 320
Total operating expenses	61 665	57 182

The total number of staff (teachers and support staff) at 31 March 2015 was 258 (2014: 260).

4. Interest bearing debt relates to the following:

	2015	2014
	R'000	R'000
Mortgage bond		
Closing balance	41 287	47 876
Short-term portion	(7 387)	(6 589)
Non-current portion	33 900	41 287

The mortgage bond bears interest at a fixed rate of 9.5% per annum and is repayable in annual instalments in arrears. The market related rate on similar mortgage bonds is 10% per annum. The mortgage bond is due to be fully repaid on 31 March 2021.

5. Currow receives tuition fees from certain parents in advance. These amounts are recognised in revenue over the period that tuition is provided.
6. Currow paid no dividends in FY2015.

Additional information:

- The appropriate cost of equity for Currow is deemed to be 13.2%.
- The free cash flows generated by Currow in FY2015 are forecast to grow by 8% per annum for the next three years and by 4% per annum thereafter.
- The target capital structure of Currow is assumed to be 30% debt and 70% equity, based on market values, for the foreseeable future.
- The long-term average earnings before interest and taxation (EBIT) multiple (enterprise value divided by EBIT) of education businesses listed on the JSE is 9.
- A discount of 30% is to be applied to the derived valuation of Currow to take into account the unlisted status of the company and its smaller size compared to similar listed companies.
- Corporate tax rate is 28%.

REQUIRED

- a) **Calculate** the key ratios that the board of directors of Currow should use in analysing the financial performance and financial position of Currow at the end of FY2015, using the following categories:
- *Profitability (9)*
 - *Capital structure and solvency (3)*
 - *Return on invested capital (3)*
- (15)
- b) **Identify** and **describe** the key business risks faced by Currow.
- (5)
- c) **Determine** the market value of equity of Currow, using the discounted cash flow and earnings multiples methods.
- (20)
- d) **Provide** five conditions that need to be met to ensure that reliable results are obtained in using the earnings multiples method.
- (5)
- [45]**

QUESTION 17: AFRICAN BAG (12 marks)**VALUATIONS
MERGERS & ACQUISITIONS**

African Bag (Pty) Ltd ("African Bag") is a Midrand-based retailer with operations throughout Africa. The company imports and sells high-end handbag brands. More than 95% of its sales are on credit, as most clients are not able to pay cash for the products.

The local economy has come under immense pressure because of the decline in global demand of local resources and a record high unemployment rate. This, coupled with poor credit risk management policy, has led to African Bag writing off 50% of its debtors' book for the year ended 31 December 2014.

The company also has a senior debt in its balance sheet, with a repayment date of 30 September 2015. One of the few options the company has to be able to continue as a going concern is a fresh issue of shares to recapitalise its balance sheet. Jimmy Marcus, a leading international retailer has, for years been trying to enter the South African market, and has now made an offer to purchase 30% of African Bag.

The directors of African Bags have accepted the offer and the two companies expect the deal to be completed on 30 June 2015 and the funds will be transferred immediately into African Bag's money market account on the same day. These funds will be kept in the account until 30 September 2015. Interest is earned/ paid equally throughout the year. Net operating profit before tax for the 9 months ending on 30 September 2015 is expected to increase by 5% and interest rates are not expected to change.

Information as at 31 December 2014	
	R'000
Enterprise value (after bad debt adjustment)	620 000
Net operating profit after tax (NOPAT)	68 054
Senior debt	200 000
Number of shares in issue	1 000 000
Interest on senior debt (p.a.)	10%
Interest on money market account (p.a.)	5%
Tax rate	28%

REQUIRED

- a) **Calculate** the estimated EPS at 30 September 2015 of African Bag (Pty) Limited.

[12]

QUESTION 18: SPLITZ STORES (18 marks)

Splitz Stores (Pty) Ltd ("Splitz Stores") was founded 20 years ago by its current chairman, Shaun Spielberg and the incumbent chief executive officer, Zelda Zara. The shareholders of Splitz Stores are The Spielberg Family Trust (50%), Ms Zelda Zara (25%), Ms Geraldine Ackerman, the chief financial officer (10%) and Splitz Stores Employee Share Trust (15%).

The company has over 150 retail stores throughout South Africa, which all sell shoes and accessories. Splitz Stores prides itself on offering high quality fashion apparel at exceptional prices, aimed predominantly at 18 to 30 year old customers. International fashion trends are closely monitored to ensure that Splitz Stores is abreast of the latest trends.

The National Credit Regulator (NCR) has recently given Splitz Stores a clean audit report for its credit process when it comes to customers that buy on credit (50% of total sales are on credit), while hefty penalties have been imposed on a number of its competitors. Generally, consumer spending in South Africa has been depressed over the past two years as a result of the knock-on effect of the global financial crisis. However, Splitz Stores has managed to increase revenue despite the prevailing economic conditions. Ms Zara attributes this to Splitz Stores' retention of loyal customers and its ability to attract new customers. Shoes are sourced both locally and internationally from suppliers who manufacture major shoe brands.

Splitz Stores generates positive cash flows annually. The board of directors of the company has been exploring various options to utilise cash resources more effectively. Current deposit rates in the money market are low and Mr Spielberg is of the firm opinion that surplus cash should be paid out to shareholders and external debt should be considered if funds are needed at a later stage. However, Ms Zara believes that Splitz Stores should always have a reasonable level of cash on its balance sheet as a buffer.

REQUIRED

- a) Critically **discuss** the arguments raised by Mr Spielberg and Ms Zara. (8)
- b) **Identify** and **explain** the risks that Splitz Stores is exposed to, using the classification below:
- *Business (4 marks)*
 - *Financial (credit, interest & currency) (3 marks)*
 - *Regulatory/legal (3 marks)*

(10)

[18]

QUESTION 19: SIMON & SON (40 marks)

Simon & Son Ltd is a medium size manufacturing business that is highly dependent on electricity for production.

Due to the recent load shedding, the production and profit of the company is under massive strain. The directors have decided to invest in a solar power system as an alternative energy source, to minimise the impact of load shedding on the business as there is no other short to medium-term solution to the national electricity crisis. The project cost is estimated at R16 250 000 and will commence as soon as the funding of the project is confirmed.

The three directors of the company are still not in agreement on how to fund the project and have tasked your consulting team to investigate the three options on the table as possibilities of funding the project. They will then make a final decision based on the information provided by your consulting team.

From the minutes of the last board meeting you gathered that the views of the three directors are as follows:

Managing director

He is of the opinion that the project should be financed through the issuing of new shares as debt finance is riskier than equity finance.

Chief operating officer

He is of the opinion that the project should be financed through the issuing of cumulative redeemable preference shares. He believes that this instrument is cheaper than other debt instruments available to the company.

Financial director

She is of the opinion that the company should use a mix of debt and equity. Unfortunately, she was not able to support her recommendation with proper reasons as the meeting had to be adjourned due to time constraints and other meetings.

Your management consulting team was tasked by the financial director to

- critically evaluate each of the director's views
- calculate the cost of capital for the proposed project
- establish the capacity of the company to raise debt, equity or both

The following is an extract of the statement of financial position at 28 February 2016.

	Notes	Rand
Equity and Liabilities		
Total equity		50 000 000
Ordinary share capital	1	40 000 000
Retained income	2	10 000 000
Total liabilities		34 050 000
Non-current liabilities		27 500 000
Debentures	3	15 000 000
Preference shares	4	12 000 000
Deferred tax		500 000
Current liabilities		6 550 000
Trade payables		950 000
Bank overdraft	5	5 000 000
Provisions		600 000
Total equity and liabilities		84 050 000

Notes

1. The issued ordinary share capital is made up of 1 million shares. The latest known share price was R66 cum div and the company has just declared a dividend of R6 per share. The dividends are expected to grow at a rate of 8% per annum.
2. The retained earnings are not available for future projects.
3. The debentures were issued at an annual pre-tax coupon rate of 11,11% redeemable at the end of eight years. Three of the eight years have already expired and similar debentures are currently yielding at an annual pre-tax coupon rate of 13,89% in the market.

4. The 9% preference shares are redeemable at a premium of 5% in 10 years' time. Dividends for the current year have been paid and the preference shares in a similar risk class are currently yielding 12% per annum.
5. The bank overdraft bears an average interest rate of 12,5% (after tax) per annum. The overdraft is used to bridge the working capital requirements when the need arises, and the balance fluctuates monthly.
6. The current effective tax rate is 28%.
7. The company has a target capital structure of 60% equity and 40% debt. The 40% target debt consists of 20% debentures and 20% preference shares.

REQUIRED

- a) **Calculate** the cost of capital for evaluating proposed project and **indicate** briefly what assumptions underlie the use of this cost for the new project.

(Calculation 8 marks; comment 3 marks)

(11)

- b) **Prepare** a memorandum to the board of directors where you critically **evaluate** each of the director's views on the appropriate funding instrument.

(10)

- c) With supporting calculations, **demonstrate** the company's ability / capacity to raise debt, equity or both, if working towards the target capital structure.

(14)

- d) **Discuss** five (5) qualitative factors that the directors should consider in the planning of the implementation of the project.

(5)

[40]

- VALUATIONS
- MERGERS & ACQUISITIONS
- Working capital

QUESTION 20: umfula.co.za (30 marks)

Umfula.co.za Ltd is a listed South African electronic commerce company with headquarters in Cape Town. It is the largest internet-based wholesaler in South Africa and is seen as a potential target for acquisition by financial analysts.

Umfula.co.za Ltd started as an online bookstore, but soon diversified, selling DVDs, VHSs, CDs, video and MP3 downloads/streaming, software, video games, electronics, apparel, furniture, food, toys, and jewellery. The company also produces consumer electronics — notably, Umfula.co.za e-book readers, Umlilo tablets, Umlilo TV and Umlilo Phone — and is a major provider of cloud computing services.

The value of the company has therefore been a matter of public debate in recent weeks and the following financial information is available:

Year	2012	2013	2014	2015
	R million	R million	R million	R million
Turnover	263	265	290	300
Profit after tax	17	17	19	20
Total dividends	10	11	11	12

Statement of financial position information on 31 December 2015**R million****Assets**

Non-current assets	282
Current assets	168
Inventory	125
Trade receivables	43
Total assets	450

Equity and liabilities

Equity	258
Ordinary share capital	40
Accumulated reserves	218
Non-current liabilities	
8% debenture	50
Current liabilities	142
Trade payables	82
Bank overdraft	60
Total equity and liabilities	450

All sales were on 30 days' credit to commercial customers. In order to encourage customers to pay on time, Umfula.co.za proposes introducing an early settlement discount of 1% for payment within 30 days, while increasing its normal credit period to 45 days. It is expected that, on average, 50% of customers will take the discount and pay within 30 days, 30% of customers will pay after 45 days, and 20% of customers will not change their current paying behaviour (thus paying in 60 days).

Umfula.co.za is currently placing orders of 1 500 units of the Umlilo-Phone (U-phone) per month, the demand for which is constant. Pear Ltd is the only supplier of U-phone and the cost of U-phone purchases over the last year was R54 million. The supplier has offered a 2% discount for orders of U-phone of 3 000 units or more. The average stock on hand is 750 units (1 500/2). Each order costs Umfula.co.za R3 000 to place and the holding cost is R50 per unit per year. The revised accounts receivable policy will be financed by the overdraft facility.

Additional information:

1. The shares of Umfula.co.za Ltd have a nominal (par) value of 100c per share and a market value of R5.00 per share.
2. The cost of equity of the company is 9%.
3. The business sector of Umfula.co.za Ltd has an average price/earnings ratio of 17 times.
4. The 8% debentures are redeemable at nominal (par) value of R100 per debenture in seven years' time and the after-tax cost of debt of Umfula.co.za Ltd is 6% per year.
5. The expected net realisable values of the non-current assets and the inventory are R276m and R130m, respectively.
6. In the event of liquidation, only 80% of the trade receivables are expected to be collectable.
7. Umfula.co.za has an overdraft facility charging interest of 10% per year.

REQUIRED

- a) **Calculate** the impact on the collection period as well as the financial impact (in R millions) of the net benefit or cost of the proposed changes in trade receivables policy and **remark** on your findings.

[Round off the rand values to million and all other calculations to 1 decimal]

(Calculation 4 marks; comment 2 marks)

(6)

- b) **Determine** (in millions) whether the bulk purchase discount offered by Pear Ltd is financially acceptable; and **explain** the assumptions outlined by your calculation.

(Calculation 4 marks; comment 2 marks)

(6)

- c) **Calculate** the value of Umfula.co.za Ltd using the following methods:

- i). Market capitalisation (equity market value) (2 marks)
- ii). Net asset value (liquidation basis) (2 marks)
- iii). Price earnings method using the business sector average P/E ratio (2 marks)
- iv). Gordon's dividend growth model (2 marks)

g for the Gordon's dividend growth model should be calculated as follows:

$$g = br_e$$

Where:

$$b = \text{historic retention ratio} \left\{ \frac{\text{sum of the historic profit after dividend and tax}}{\text{sum of the historic profit after tax}} \right\}$$

$$r_e = \text{current return on shareholders' fund} \left\{ \frac{\text{Profit for the year}}{\text{Shareholders' equity}} \right\}$$

(8)

- d) **Analyse** and **debate** the relative merits of the valuation methods in part (c) above in determining a purchase price for Umfula.co.za Ltd.

(8)

(Communication skills – clarity of expression, layout and communication 2 marks)

(2)

[30]

QUESTION 21: PURIFIED H₂O (20 marks)**CAPITAL BUDGETING**

Purified H₂O (Pty) Ltd ("Purified H₂O") is a private company selling purified water to companies, government departments and individuals mainly in the Gauteng area. The company sells bottled water ranging from 500 ml to 10 litres. The business is growing faster than anticipated and as a result the directors have decided to open one more city branch in either Sandton or Pietermaritzburg. Purified H₂O has limited financial resources and can only invest in one branch. You, as the chief financial officer, have been requested to analyse the commercial viability of the two cities and recommend which city will be the best for opening the branch. After much research, the following information is available to you:

THE SANDTON MARKET

1. The new purifying machine will cost the company R600 000 and can be sold for R100 000 in five years' time. Working capital of R120 000 will be required at the opening of the branch.
2. The following are prices for different bottle sizes at the Sandton branch for walk-in customers:

500ml – R5

1l – R7,50

5l – R25

10l – R50

105 000 walk-in customers ("sales volume") are projected annually for the next five years. Sales volume is expected to be equal for 500 ml, 1 l and 5 l. The 10l bottle size has a low demand and it is expected that its sales volume will be half that of 500ml. The sales mix is estimated to remain the same for the next five years.

3. The Sandton Conference Centre (SCC) is interested in securing a contract with Purified H₂O to be the sole provider of bottled water for their conference facility over a period of five years. The conference centre has 20 conference rooms that are used for 26 days in a month, with an average daily consumption of 50 units of 500 ml bottled water per conference room. A special price of R4 per 500 ml has been agreed with SCC.
4. Good Life Restaurant at Sandton Square has agreed to purchase annually 200 000 500 ml bottles on condition that the price is R4.50 per bottle for the next five years.
5. Variable costs are estimated at R1 019 000 and fixed costs, including depreciation at R975 000.

THE PIETERMARITZBURG MARKET

1. Purified H₂O will buy a second hand purifying machine at a cost of R500 000. The working capital of R80 000 at the start of the project.
2. Normal average sales to walk-in customers are estimated at R3 500 000 per annum and are estimated to remain the same for the next five years.
3. The company has registered on the supplier databases of government departments in Pietermaritzburg. It is estimated that an average of R200 000 sales per annum will be generated from the departments. These projections are in line with the actual sales received by the Pretoria CBD branch.
4. The contribution ratio of the total branch sales is projected at 70% for the duration of this five-year venture.
5. Cash fixed costs are estimated at R900 000 per annum.

Additional information:

- The current company tax rate is 28%.
- The company uses a weighted average cost of capital of 12%.
- SARS allows a wear and tear of six years for a brand new purifying machine, and five years for a second-hand machine.
- The depreciation policy of the company is eight years for new machines and five years for second-hand machines

REQUIRED

- a) **Advise** the management team of Purified H₂O whether they should invest in any of the two branches.

[20]

QUESTION 22: S&S (10 marks)**WEIGHTED AVERAGE COST OF CAPITAL**

Simphiwe is the financial manager of S&S Ltd and has been instructed to find a suitable funding instrument for new equipment that needs to be purchased at a cost of R375 000. He has identified two possible funding instruments, namely a loan from CapC Bank and the issue of new shares. He has discussed the loan option with the bank manager from CapC Bank and also had discussions with a few investors that are interested in taking up some shares in S&S Ltd.

The following information is available based on the outcome of his discussions:

CapC Bank

1. The bank manager of CapC Bank has agreed to grant a loan of up to 100% of the total purchase value.
2. The loan will be granted in multiples of R75 000, and S&S Ltd can decide how many multiples they would like to borrow from the bank.
3. For a 100% loan, the risk is higher and therefore the interest rate charged for a 100% loan is 17,5% before tax.
4. For every R75 000 not taken up by S&S, the interest rate will decrease by 1,25% as the risk to the bank reduces.

Issue of new shares to prospective investors

1. Investors are very keen to invest in S&S Ltd and after discussions; Simphiwe identified enough interested parties to take up 100% of the investment amount needed.
2. If everything is financed through equity the equity holders will require a return of 15% per annum on their investment.
3. If a portion of the funds are generated through the loan the investors are of the opinion that it will increase their risk and they will therefore require a greater return on their investment. They have agreed that they will require an additional return of 0,25% for every R75 000 that is borrowed from CapC Bank.

REQUIRED

- a) **Determine** the optimal capital structure of S&S Ltd to finance the new equipment. Assume a corporate taxation rate of 28%.

[10]

FINANCIAL ANALYSIS CAPITAL BUDGETING

QUESTION 23: SPHA (50 marks)

Spha Limited (Spha) is the third biggest food retailer listed on the JSE, with a network of more than 1 400 stores countrywide. To increase its footprint and its bottom line, Spha is planning to open small grocery outlets (known as “Spha Express”) that will operate 24 hours a day. The company management is currently in negotiations with Engine Petroleum Limited (Engine), a company that runs filling stations across the country, to lease its stores for five years (see additional information – part B). The following financial information is extracted from Spha Limited 2015 annual report.

Statement of comprehensive income

for the year ended 30 September 2015

R million	Notes	2015	2014
Revenue	1	47 796	43 560
Operating profit	2	1 650	1 510
Interest received		34	33
Interest paid		(25)	(28)
Share of equity accounted associate income		3	4
Profit before taxation		1 662	1 519
Taxation	3	(472)	(460)
Profit for the year		1 190	1 059
Earnings per share (cents)		691	616
Dividend per share (cents)		485	405
Share price (cents)		12 120	12 800
Retail stores		1 431	1 416
Inflation		6.1%	8.2%

Statement of financial position

as at 30 September 2015

R million	Notes	2015	2014
ASSETS	4		
Non-current assets		2 381	2 223
Property, plant and equipment		1 749	1 588
Goodwill		388	391
Investment in associates		153	174
Other investments		64	59
Deferred taxation asset		27	11
Current assets		7 404	7 673
Trade and other receivables		1 374	1 416
Inventories		5 841	5 341
Prepayments		77	75
Bank		112	841
Total assets		9 785	9 896
EQUITY AND LIABILITIES	4		
Capital and reserves		3 177	2 838
Stated capital		19	48
Share based payment reserve		355	323
Retained earnings		2 803	2 467
Non-current liabilities		240	243
Post-retirement medical aid provision		108	103
Deferred tax liability		117	133
Provisions		15	7
Current liabilities		6 368	6 815
Trade and other payables		6 205	6 773
Taxation payable		53	42
Bank overdraft		110	
Total equity and liabilities		9 785	9 896

Notes

1. Sales occur evenly throughout the year in 365 days.
2. Operating profit is derived at, after taking into account the following items:

R million	2015	2014
Other operating income	(548)	(519)
Warehousing and distribution expenses	1 209	1 088
Marketing and selling expenses	753	674
Depreciation	139	125
Other expenses	604	553
Net operating expenses	2 157	1 921

3. The company taxation rate is 28%.
4. Spha uses average balances for real account when computing ratios.

Additional information:

A. 2014 ratios:

	2015	2014
Change in turnover (%)	To calculate	12.2%
Fixed asset turnover (times)	To calculate	30.1
Gross profit margin (%)	To calculate	7.9%
EBITDA per store (R'000)	To calculate	1 155
Dividend payout ratio (%)	To calculate	65.7%
P/E ratio (times)	To calculate	20.8
Return on Assets (%)	To calculate	15.5%
Return on Capital Employed (%)	To calculate	53.7%

B. The Spha Express Project

- As part of the pilot phase of this project, Spha will lease two stores at Engine's La Lucia and Westville filling stations at a rental amount of R20 000 per month for both sites. The annual rent is payable upfront with a deposit of R50 000 refundable at the end of the lease. The lease contract will have an escalation clause of 5% per annum.
- Renovations, fittings and other equipment will cost Spha R500 000 at the start of the lease for both stores. SARS will allow this cost to be written off over five years. The scrap value is negligible.

- Each store is expected to generate R5 000 on sales per day.
- Due to overtime worked by employees and distribution costs, the gross profit margin will average 40% throughout the project life.
- Operating costs (including salaries, administration, selling expenses, etc.) are budgeted at R1 000 000 in the first year of operation.
- There is a taxation lag of one year.
- Sales and operating expenses are expected to grow at current inflation rate.
- HABC Bank has agreed to finance this project at prime + 2.25%. The current prime lending rate is 9.25%.

REQUIRED

- a) **Analyse** the financial performance and the financial position of Spha Limited based on the following ratios:

- i). Change in turnover (*calculation 1 mark; comment 2 marks*)
- ii). Fixed asset turnover (*calculation 2 marks; comment 2 marks*)
- iii). Gross profit margin (*calculation 2 marks; comment 2 marks*)
- iv). EBITDA per store (*calculation 3 marks; comment 2 marks*)
- v). Dividend pay-out ratio (*calculation 1 mark; comment 2 marks*)
- vi). P/E ratio (*calculation 1 mark; comment 2 marks*)
- vii). Return on assets (*calculation 2 marks; comment 2 marks*)
- viii). Return on capital employed (*calculation 2 marks; comment 2 marks*)

(30)

- b) **Advise** the management team of Spha Limited whether to invest in the Spha Express Project.

(20)

[50]

QUESTION 24: A GREYS (20 marks)**WORKING CAPITAL**

A Greys (Pty) Limited has been operating an acute care facility in Gauteng. The hospital has been operating for approximately 19 months.

"At A Greys (Pty) Ltd, our priority is to focus on the delivery of a special brand of health and care to patients. Within a world class hospital, this unique approach is what makes the difference and helps us to maintain our position as one of the top hospitals in the country," says the hospital director.

The hospital has recently experienced serious cash flow problems, amongst other things due to the high start-up costs. The cash flow problems have reached critical proportions and management are desperately seeking a solution to the problems. They have approached the management consulting services division of their audit firm, where you work as a consultant, to give them plausible ways by which to resolve their problems.

The following details were discussed during a meeting with the consultants from the audit firm:

Inventory

The value of the hospital's inventory is R750 000. This represents two and a half months' worth of inventory. The hospital purchases their inventory from various suppliers based throughout the country. Not all suppliers are reliable with lead times ranging from anything from 1 to 15 days. Management suggests ceasing all purchases and using up the current inventory. Thereafter they propose implementing a Just-In-Time inventory system.

Accounts receivable

Approximately 50% of the patients (based on value) are private patients and the remaining 50% are medical aid patients. The accounts department has a very relaxed atmosphere. In fact many of the personnel working in this department have on occasions been heard saying, *"I would not exchange this job for anything in the world"*.

The current amount outstanding from private and medical aid patients is R3 500 000. Management informs you that medical aids can take up to 150 days to pay. *"How long does it take for you to do the billings for the hospital?"* you ask. The reply astonishes you. *"Sometimes up to 90 days"*.

Approximately 20% of all private patient accounts and the private portions of the medical aid accounts are irrecoverable. On further investigation you determine that all patients are admitted, without asking for any deposit or checking validity of medical aid cards. No follow-ups are done on outstanding amounts.

Accounts payable

All purchases are done on a 3/10 net 30 basis. The suppliers are very strict regarding this.

Cash resources

The balance on the current account is R1 million (overdraft). The bank has intimated that they would be willing to increase this facility. The effective interest rate applicable is prime + 5% per annum. Currently prime is 10%. Further investigation has shown that most medical aids pay by cheque and that it can take up to five days before the company banks the cheques.

REQUIRED

- a) **Draft** a memorandum to management, in which you **critically assess** the working capital management situation of the company. Where necessary, make **recommendations** as to how to improve the management thereof as well as ways to resolve the current cash flow crisis.

[20]

Comments:

3/10 net 30 - this means the buyer must pay within **30** days of the invoice date, but will receive a **3%** discount if they pay within **10 days** of the invoice date.

QUESTION 25: LANGA HOTELS (30 marks)

Note: S24J (i.e. amortisation of a loan in WACC), including the implications thereof, is not examinable in MAC3702

Langa Hotels Limited is a group of hotels with footprints across South Africa and is listed on the Johannesburg Stock Exchange. Its hotels specialise in African architecture, food, attire, linen and decorations. The management team is planning to expand the “African hotel” concept to the rest of Africa, with the first investment in East Africa, Tanzania (Langa Zanzibar Hotel) for R10 million.

The following is an extract from the Statement of financial position at 31 March 2016:

	Notes	2016 R'000
EQUITY AND LIABILITIES		
TOTAL EQUITY		57 500
Ordinary share capital	1	45 000
Non-distributable reserves		2 000
Retained income		10 500
 Non-current liabilities		 13 037
Long-term portion: Interest-bearing loan	2	2 438
Debentures	3	6 000
Preference share capital	4	3 549
Deferred taxation		1 050
 Current liabilities		 3 696
Short-term portion: Interest-bearing loan	2	2 196
Trade and other payables		500
Bank overdraft	5	1 000
 TOTAL EQUITY AND LIABILITIES		 74 233

Notes

1. The ordinary shares are currently trading at R100 each. All shares were issued at R90 per share at the inception of the company. The company declared a dividend of 80 cents per share held. The basic earnings per share amounted to R99 (2015: R88).
2. The interest bearing loan was obtained from Wealth Bank on 1 April 2013 for R10 000 000. The loan is repayable, annually in arrears, in five annual equal instalments comprising capital and interest. The fixed interest rate on the loan is 11% and the current market-related rate is prime rate plus 1%.

The following amortisation table is applicable to the loan:

Year	Outstanding capital (Beginning)	Interest for period	Instalment	Capital portion	Outstanding capital (end)
2014	10 000 000.00	1 100 000.00	2 705 703.10	1 605 703.10	8 394 296.91
2015	8 394 296.91	923 372.66	2 705 703.10	1 782 330.44	6 611 966.47
2016	6 611 966.47	727 316.31	2 705 703.10	1 978 387.78	4 633 579.69
2017	4 633 579.69	509 693.77	2 705 703.10	2 196 009.33	2 437 570.36
2018	2 437 570.36	268 132.74	2 705 704.10	2 437 570.36	0

Please ignore the effect of section 24J taxation saving on cash flows relating to the interest-bearing loan (viz PMT = instalment).

3. The debentures mature at a premium of 5% on 31 March 2019. They carry an interest coupon rate of 13%. Similar debentures are trading at 12%.
4. Preference share capital is made up of 59 150 shares, convertible on 31 March 2017 into one ordinary share for every preference share held. It is anticipated that the share price will remain the same in the following year. Preference dividends are payable in

arrears at 12% per annum. Similar preference shares are currently trading at the same rate.

5. Bank SA has approved a short-term limit of R10 000 000 for Langa Hotels' bank overdraft. Currently R1 000 000 charged at interest of 13.5% per annum is been utilized by the company.
6. The current prime rate is 9.25% and the current taxation rate has remained unchanged at 28%.

REQUIRED

- a) **Calculate** the weighted average cost of capital (WACC) based on the current capital structure and based on market values.

[Round off the rand values to the nearest rand and all percentages to 2 decimals]

(20)

- b) **Evaluate** the available financing options as previously utilised by the company, and **advise** the management of Langa Hotels Limited on how to finance the Langa Zanzibar Hotel project.

(10)

[30]

FINANCIAL ANALYSIS WORKING CAPITAL

QUESTION 26: PBC (55 marks)

PBC Limited ("PBC") is one of the leading suppliers of cement in Southern Africa, with manufacturing plants in South Africa, Zimbabwe and Botswana. The company also produces aggregates, lime, burnt dolomite and limestone. The statement of comprehensive income and statement of financial position for PBC are provided below:

Statement of comprehensive income for the year ended 30 September 2016

R mil	2016
Revenue	923
Cost of sales	(644)
Gross profit	279
Operating costs	(156)
Finance costs	(50)
Interest income	8
Profit before taxation	81
Taxation	(21)
Profit for the year	60
Shares in issue ('000)	22 000
Share price – closing (cents)	3 440

Statement of financial position at 30 September 2016

R mil	2016
Non-current assets	
Property, plant and equipment	1 090
Goodwill	35
Investments	122
Current assets	
Inventory	99
Trade and other receivables	120
Cash and cash equivalents	74
Total assets	1 540
Capital and reserves	
Stated capital	550
Other reserves	27
Retained income	338
Total equity	915
Non-current liabilities	
Long-term borrowings	465
Deferred taxation	18
Current liabilities	
Provision	68
Trade and other payables	74
Total equity and liabilities	1 540

Additional information:

2016 financial results

1. The following are some of PBC's key performance indicators for the year ended 30 September 2015:
 - EBITDA margin: 27,65%
 - P/E ratio: 14,20 times
 - Bad debt ratio: 6,89%
 - Stock turnover: 5,88 times
 - Debt-equity ratio: 0,58: 1
 - Price to book value: 1,03: 1
2. Depreciation for the year ended 30 September 2016 was R71 million.
3. The credit sales make up 20% of total sales. Bad debts written off during the 2016 financial year amounted to R9,23 million.

Robert Murray Limited contract

PBC continues to face tough competition from foreign cement producers (due to dumping), but the company still enjoys a 30% share of the South African cement industry. Due to strong presence, PBC is one of the key limestone & cement suppliers of Robert Murray Limited ("Robert Murray"), a major construction company in Africa. In August 2016 (two months ago), Robert Murray won a bid to build a highway footbridge that would connect people between the eastern and the western side of the Randburg business district.

The construction is expected to begin shortly (the start date is 1 November 2016 and completion is expected to be on 30 June 2017) and PBC has already started clearing the area next to the construction site to process and store its materials. This work by PBC should be completed at the end of this month (31 October 2016) at a total cost of R1 million. PBC is also raising a loan of R28 million from BnP Capital on 15 October 2016 to fund its supplies and labour costs. The interest rate on this loan will be fixed at 150 basis points below prime and the interest (not compounded) will be paid annually, whereas the capital portion will only be repaid at the end of the loan term (14 October 2017).

PBC will be required to supply cement to Robert Murray at a fixed price for the duration of the project to the total order value of R26 million. The orders will be spread evenly throughout the project, starting at the beginning of November 2016. Delivery and other related costs will

amount to R500 000 per month but will be paid one month in arrears and borne by PBC. These costs will not be transferred to Robert Murray.

BC will also supply limestone to Robert Murray for the next five months. The first load of limestone will be sold and delivered to Robert Murray on 24 November 2016. This load will cost PBC R4 million but will only be used by Robert Murray in December 2016. The cost of production will increase by 15% in December 2016 and revert to November 2016 levels in subsequent months. Assume sales take place in the same month of production.

PBC adds a margin of 50% on cost for all products sold to Robert Murray.

A new vehicle will be delivered to PBC's site on 1 November 2016. The cost of the vehicle is R200 000. The vehicle will be used by the site manager and is also expected to be used at other company sites after the completion of the project. PBC expects this vehicle to have a useful life of five years.

Operating income and expenses from the 2016 financial period (excluding the Robert Murray contract) are expected to increase at an average annual rate of inflation + 4%. All income earned and expenses incurred by PBC are distributed evenly throughout the year.

The prime rate is 10,5% while inflation is at 6%. The effective taxation rate should be used for budgeting and projection purposes.

REQUIRED

- a) **Calculate** and **comment** on possible reasons for movement in the following ratios for the year ended 30 September 2016:

[Round off answers to two decimal places.]

- i). EBITDA margin
- ii). P/E ratio
- iii). Bad debt ratio
- iv). Stock turnover
- v). Debt-equity ratio
- vi). Price to book value ratio

(Calculations 17 marks; comments 6 marks and presentation 2 marks)

(25)

- b) **Describe** key business, currency and interest rate risks faced by PBC Limited.

(5)

- c) **Prepare** a projected statement of comprehensive income for the three months ending 31 January 2017.

[Scale all rand values to R mil and show all workings.]

(25)

[55]

QUESTION 27: BOXER CASH & CARRY (35 marks)

Tesco PLC is a British multinational grocery and general merchandise retailer headquartered in London, United Kingdom. The Britain's economy has continued to be sluggish, especially following Britain's Brexit vote and the company is now looking at the possibility of entering the South African food retail industry. The company is in advanced talks with Brains Limited, a private equity firm which owns 70% of shares in Boxer Cash & Carry (Pty) Ltd ("Boxer"). Tesco is interested in making an offer to Brain Limited for its entire stake in Boxer.

Boxer is one of the major retailers in South Africa and has a strong presence in rural areas. This supermarket's revenue is currently growing at an average of 22% per annum mainly due to its aggressive store expansion programme. Having started with five retail outlets in KwaZulu-Natal ten years ago, the company boasts of a portfolio of 45 retail outlets in KwaZulu-Natal and Eastern Cape. Boxer's management team is young and dynamic, having taken over the reins about eight months ago when Brains Limited acquired Boxer.

The market has reacted negatively to this possible foreign direct investment and as result Brains Limited's share price has dropped to 18 500 cents as at 30 September 2016. Brains Limited has 15 million authorised shares, 80% of which has been issued. Brains Limited has cited "growing competition" in the food retail space as one of the reasons behind the sale. The food retail sector in the JSE saw an increase in share price of 16%, and the sector P/E ratio currently averages 21. The financial statements of Boxer Cash & Carry (Pty) Ltd are given below.

Statement of comprehensive income for the year ended 30 September 2016

	R million
Sale of merchandise	2 100
Cost of sales	(1 660)
Gross profit	440
Salaries and wages	(130)
Depreciation	(20)
Cost of sales	(110)
Trading profit	180
Other income	10
Finance costs	(30)
Profit before taxation	160
Taxation	(40)
Profit for the year	120

Statement of financial position at 30 September 2016

	R million
Assets	
Non-current assets	300
Land and buildings	160
Equipment and fittings	110
Investments	30
Current assets	180
Inventory	100
Trade receivables	60
Cash	20
Total assets	480
Equity and liabilities	
Equity	240
Ordinary share capital	60
Accumulated reserves	180
Non-current liabilities	150
8% Debentures	80
10% Long-term loan	70
Current liabilities	90
Provisions	50
Trade payables	40
Total equity and liabilities	480

Additional information:

1. The land and buildings can be sold at its open market value of R300m and the estimated tax bill is R20m (for recoupments on allowances previously granted). The estate agent charges 5% as a commission on the selling price.
2. The net realisable value of inventory is R45m and debtors can be factored (sold to a financial institution) at 85% of the carrying value.
3. Early settlement of the current long-term loan (original maturity date is December 2020) will amount to a cancellation fee of R7m.
4. Boxer's investments are stated at historical carrying value and the estimated fair market value is R50m.
5. For valuation purposes, the weighted average cost of capital of 12,5% should be used. The corporate tax rate of 28% has remained unchanged for the past decade.

REQUIRED

- a) **Calculate** the market capitalisation of Brains Limited at 30 September 2016. (3)
- b) **Determine** how much Tesco PLC should offer Brains Limited for its interest in Boxer Cash & Carry (Pty) Ltd, using the net asset value method. (7)
- c) **Determine** how much Tesco PLC should offer Brains Limited for its interest in Boxer Cash & Carry (Pty) Ltd, using the earnings multiple method. (8)
- d) **Calculate** the value of Boxer Cash & Carry (Pty) Ltd business using the free cash flow model. Assume that operating expenses include post-tax provision for bad debt adjustment of R2m (non-cash item) and that income and expenses will grow at 3% per annum for the foreseeable future. (5)
- e) **Calculate** the following ratios for 2016 and **provide** possible reasons for change in previous year's ratios (previous year's ratios are provided in brackets).

[Round off your answers to two decimal places]

- i). *Net debt to equity (47,34%)*
- ii). *Employee costs as % of revenue (5,83%)*
- iii). *EBIT margin (10,2%)*
- iv). *Cash ratio (0,41: 1)*
- v). *Capital gearing ratio (33,67%)*
- vi). *Inventory turnover (12,3 times)*

(12)

[35]

**WACC
FINANCIAL ANALYSIS**

QUESTION 28: QUEEN POWER (45 marks)

Queen Power Ltd is a medium size manufacturing business that is highly dependent on electricity for production. Due to the recent load shedding, the production and profit of the company is under massive strain. The directors have decided to invest in a solar power system as an alternative energy source, to minimise the impact of load shedding on the business as there is no other short to medium-term solution to the national electricity crisis. The project cost is estimated at R25 000 000 and will commence as soon as the funding of the project is confirmed.

The following is an extract from the statement of financial position at 31 March 2016:

	Notes	Rand
Equity and Liabilities		
Total equity		65 000 000
Ordinary share capital	1	40 000 000
Retained income	2	10 000 000
10% Preference share capital	3	15 000 000
Non-current liabilities		16 500 000
12% Debentures	4	16 000 000
Deferred tax		500 000
Current liabilities		2 550 000
Trade payables		950 000
Bank overdraft	5	1 000 000
Provisions		600 000
Total equity and liabilities		84 050 000

Notes

1. The historical average issue price of ordinary shares is 160 cents. The latest known share price is 225 cents (cum dividend of 25 cents). In line with its stable annual growth, the company is expecting to declare a dividend of 26 cents for the year ended 31 March 2017.
2. The company's post-tax net profit margin for the year was 20%, while the operating profit margin was 38%. Despite the slow economic growth and electricity supply disruptions, the company managed to increase its sales by 11% to R30 000 000. Retained earnings are not available for future projects.
3. The market value of these irredeemable preference shares is R20 000 000. Preference shareholders have indicated their willingness to convert their shares into ordinary shares should a need arise.
4. The 10-year debentures with a redemption discount of R757 574 were issued on 5 April 2010. The yield on similar debentures in the market approximates 8%. Interest is paid annually in arrears.
5. The bank overdraft bears an average interest rate of 8% per annum. The overdraft is used to bridge the working capital requirements when the need arises, and the balance fluctuates monthly.

Additional information:

- The current effective tax rate is 28%. All percentages given are before tax, unless where otherwise stated.
- The company has a target capital structure of 80% equity and 20% debt. Under the target capital structure, ordinary share capital is to be maintained at 75% of total equity.

REQUIRED

- a) **Calculate** the weighted average cost of capital of Queen Power Ltd based on both the current- and target capital structure, for the purpose of evaluating the proposed project and **comment** on the differences between these calculations.

[Round rand amounts to the nearest rand and other numbers to the nearest two decimal places]

(Calculations 22 marks; comments 3 marks)

(25)

- b) **Calculate** the following ratios for the year ended 31 March 2016 using book values:

[Round your answers to two decimal places]

- i). *Return on assets*
- ii). *Return on equity*
- iii). *Capital gearing ratio*
- iv). *Asset turnover*
- v). *Price / book value multiple*
- vi). *Interest-bearing debt to equity ratio*
- vii). *Earnings yield*

(Calculations 13 marks; comments 7 marks)

(20)

[45]

QUESTION 29: BIDDER (20 marks)

Bidder Ltd ("Bidder") is seeking accelerated growth through the acquisition of compatible external business organisations. In this regard, a committee of Bidder, tasked with identifying suitable candidates for acquisition, has suggested the purchase of Target Ltd ("Target"), a company in a different but compatible industry.

In the case of a merger between Target and Bidder, we can expect the following specific synergies and related costs:

- 50 employees of Target would immediately be made redundant at an after-tax retrenchment cost of R1,2 million.
- Annual post-tax wage savings at current prices are expected to be R750 000, while future wage increases are expected to be *double* the inflation rate for next year and *equal* to inflation for the following years.
- Some land and buildings of Target would be sold for R800 000 (after tax) and do not need to be replaced (the combined entity will have sufficient office space).
- Fixed advertising and distribution cost savings of R150 000 (before tax) would apply for next year and for each year thereafter.
- Legal and other acquisition-related costs at present value are expected to amount to R3 million (after tax).

Additional information:

- WACC of Target has been estimated at 18%.
- Income tax rate is 28%.
- Current rate of inflation is 5% per annum and it is expected to remain at approximately this level in the foreseeable future.
- Unless otherwise mentioned, all fixed expenses are expected to grow by inflation only.
- The intrinsic equity value of Target has been estimated at R20 million (this value has been determined using an income approach and excludes all possible synergies).
- If a company other than Bidder were to acquire Target, it is expected that only 40% of the net synergy benefit will be realised.

REQUIRED

- a) **Calculate** the value of all specific synergies between Bidder and Target, net of associated costs.
(10)
- b) **Determine** the minimum selling price which Target is likely to consider.
(1)
- c) **Determine** a maximum bid price which Bidder may offer without destroying its existing shareholders' value.
(1)
- d) **Determine** the fair market value of Target.
(3)
- e) Critically **discuss** reasons why Bidder should consider offering less than the maximum bid price for Target determined in c, and recommend a more suitable bid price.
(5)

[20]

QUESTION 30: ZENZEL (20 marks)**WORKING CAPITAL**

Zenzel (Pty) Ltd is a computer company that distributes computer hardware to smaller retail companies. The following information relates to the current credit terms and other aspects of the company's business:

- i. Credit sales for the year amounted to R25 750 000.
- ii. A 3% discount was offered to debtors that paid within 10 days.
- iii. Bad debt provision for the current year amounted to R2 300 000.
- iv. Currently, 20% of debtors pay within 10 days, while the remaining debtors take 45 days on average to settle their accounts.

As many of the clients cannot afford to pay in cash or 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 55% of current debtors will now make use of this option, whilst the remaining current debtors will pay within 50 days on average. Bad debt provision for existing customers will remain the same.

The following assumptions were also included in the proposal:

- Credit sales to new customers will increase with R2 500 000.
- 60% of new customers will pay within the discount period, while the remaining new customers will pay within 65 days.
- The increase in sales is expected to result in a R1 250 000 increase in inventory, and trade payables are likely to increase with R850 000.
- Bad debt will increase to R2 345 000 in total as a result of the new sales.

The contribution ratio is determined at 32%. The applicable tax rate is 28%, and WACC is equal to 20%.

REQUIRED

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

[20]

**WACC
CAPITAL BUDGETING**

QUESTION 31: TTK (30 marks)

TTK Limited (TTK) is a small industrial group listed on the Johannesburg Stock Exchange (JSE), whose shares currently trade at 600 cents per share. On this price, the dividend declared for the financial year ended 31 August 2015, yields 2,5%. In their integrated financial report for the year ended 31 August 2015, the following information was made available:

The summarised statement of financial position as at 31 August 2015:

	R'm
Total assets	770,0
Equity	325,0
Non-current liabilities	445,0
Total equity and non-current liabilities	770,0

- Equity consists of 100 million ordinary shares with a par value of R0,50 each, issued at R1,50 per share, plus accumulated reserves.
- The non-current liabilities consist of preference shares (200 000 preference shares with a nominal value of R1 000 each) and long-term debt. The issued preference shares currently pay a fixed dividend of 10,825% per annum. A market-related yield for similar preference shares is 10,25% per annum. The average cost of the remainder of the long-term debt is 8% per annum.
- TTK is investigating a new investment project of R100 million (see “**Additional Notes**”)
- The targeted debt: equity ratio of TTK is 65:35.
- The current return on equity of 20% is below the targeted return of 23%.
- The targeted cost of debt is 7% before tax.
- The management committee proposes that a hurdle rate of 3% be added to the company's weighted average cost of capital for all future project evaluation decisions.
- TTK has an effective tax rate of 27% per annum, with taxes effectively being paid one year in arrears.

Additional notes – New investment project

- The investment project will comprise of the following:
 - Capital expenditure in financial year -
 - 2016: 80% of the budgeted amount;
 - 2017: 20% of the budget amount.
 - Annual capacity of the plant and equipment will be 120 000 units, spread evenly throughout the financial year.
 - Production will commence on 1 February 2017 – for the first production period. It is anticipated that in the fourth year of production, only 90% of the capacity will be reached, as a major overhaul of the facility will be required at this point in time, costing R8,5 million. The first production period will end on 31 August 2017 and thereafter coincide with the financial year.
 - The sales price per unit will be R330 in the first period of production, escalating at 10% in the following year and then stabilising.
 - Variable costs per unit will be R150 in the first period of production, escalating at 4% per annum in the next two financial years and then stabilising.
 - Fixed costs, excluding depreciation and directly associated with the project, will be R1,2 million for each of the first two production periods and then decline to R0,9 million for production periods thereafter.
 - Fixed costs allocated to the project will be R1,5 million for financial year 2017, escalating at 5% per annum thereafter.
 - The facility and equipment will be depreciated at 20% per annum on a straight line basis.
 - The South African Revenue Service (SARS) will allow capital deductions of 40%, 20%, 20% and 20% per respective year, commencing in the 2017 financial year.
 - Initial working capital of R3 million will be required and will not be recovered at the end of the production period, which for evaluation purposes will be the end of the 2022 financial year.

REQUIRED

- a) **Calculate** both the target and actual current weighted average cost of capital (WACC) for TTK Limited. Round to the nearest cent or three decimals wherever applicable. (7)
- b) Briefly **explain** the following concepts to the Board of Directors of TTK Limited:
 - A target WACC
 - Actual WACC
 - Hurdle rate WACC(6)
- c) **Determine** if TTK Limited should proceed with the new investment project or not, assuming a WACC rate of 15%.

[Round to the nearest R'000 wherever applicable]

(17)

[30]

FINANCIAL ANALYSIS WORKING CAPITAL

QUESTION 32: LCHF (20 marks)

LCHF Limited (LCHF) is a relatively small company listed on the JSE's 'Building and Construction' sector, operating mainly as a supplier of building materials to the general public and construction industry. LCHF presented the following financial information for their financial years ended 31 August 2015.

Abridged Statement of Profit and Loss and Other Comprehensive Income for the year ended 31 August:

	2015 R'000	2014 R'000
Turnover	572 400	450 700
Cost of sales	(251 850)	(202 815)
Operating cost	(103 870)	(91 745)
• Salaries	70 060	60 400
• Other variable cost	12 650	11 195
• Other fixed cost	21 160	20 150
Operating profit	216 680	156 140
Finance cost	(122 480)	(121 000)
Profit before tax	94 200	35 140
Taxation	(23 550)	(8 785)
Profit after tax	70 650	26 355

Abridged Statement of Financial Position as at 31 August 2015

	R'000	R'000
Assets		
Non-current assets	1 273 300	1 219 720
Current assets	80 100	66 130
Inventory	28 980	20 655
Trade receivables	49 950	30 375
Cash on hand	1 170	15 100
Total assets	1 353 400	1 285 850
Equity and liabilities		
Equity	311 900	251 250
Non-current liabilities	1 010 000	1 008 300
Current liabilities	31 500	26 300
Trade creditors	16 400	21 200
Other payables	15 100	5 100
Total equity and liabilities	1 353 400	1 285 850

Additional information

- Turnover for the financial year ended 31 August 2015 consisted of cash sales of 35% and credit sales of 65%.
- The industry inflation for this year was 11%, driven by the industry wage increases of 12% for this period.
- LCHF had a small increase in staff numbers in 2015 and boast the lowest staff turnover in the industry.
- Non-current liabilities are secured by non-current assets.

Cash position of LCHF

The directors of LCHF are concerned about the cash position of LCHF. During a recent strategic breakaway session, they formulated the following strategies:

- Cash and credit sales to carry equal weight;
- Trade receivables outstanding to be kept at 40 days;
- Inventory turnover to be 12 times per annum.

REQUIRED

- a) **Analyse** and **interpret** LCHF Limited's operating performance for the 2015 financial year, by computing profitability ratios including relevant growth ratios.

[Round all your calculations to one decimal place]

(Calculation 8 marks; comment 5 marks; presentation 1 mark) (14)

- b) Briefly **discuss** LCHF's working capital position. (6)

[20]

QUESTION 33: TRUCK & TRAILER (20 marks)**WEIGHTED AVERAGE COST OF CAPITAL**

“Truck & Trailer (Pty) Ltd (T&T) is a freight and transport company that specialises in transporting products from A to B. With more than 200 vehicles our fleet comprises of the complete range of vehicles, including taut lines, flat decks, trailers, rigid vehicles and refrigerated trucks. Our road logistics service spans 13 African countries and where possible we offer consolidation and group truck loads to reduce our clients’ costs and improve efficiency.”

The directors of T&T are considering expanding into a new product line where they want to purchase specialised trucks to transport chemicals. They are currently busy with a feasibility study and would like to use the discounted cash-flow technique to evaluate the different expansion options.

They still need to calculate the weighted average cost of capital needed for the evaluation purposes of the different expansion options. The undermentioned has reference to the statement of financial position that follows:

T&T has an authorised share capital of 10 million ordinary shares and the current ex-dividend market price per ordinary share is R1,50. A dividend of R0,25 per share was paid recently.

Mr Nkosi, the company’s project analyst, has established that the current long-term RSA government bonds yield an interest of 7% per annum. The company has a historic beta of 1,5 and the market rate of return required on similar shares equals 15%.

All finance costs on debt are payable annually, and all the current year’s payments will be made shortly. The current market yield on similar preference shares and debentures is 10% and 14% respectively. The debentures will mature in 3 years at a premium of 10% (the premium is only payable a year after maturity).

The 11,5% bank loans are not traded on the open market, but Mr Nkosi estimates that the effective pre-tax cost is 4% above overdraft rate (which is currently 9,5%). The loans are repayable in 5 years. The company tax rate is 28%.

The following is an extract of T&T's **statement of financial position at 30 September 2016:**

	2016
	R
Equity and liabilities	
Capital & reserves	11 000 000
Ordinary share capital (8 million ordinary shares)	8 000 000
Non-distributable reserve	1 800 000
Retained income	1 200 000
Total liabilities	9 910 000
Non-current liabilities	9 855 000
11,5% Long term loans	4 000 000
11% Debentures	3 000 000
8% Preference shares	2 800 000
Deferred taxation	55 000
Current liabilities	55 000
Trade payables	13 000
Bank overdraft	30 000
South African Revenue Services	12 000
Total equity and liabilities	20 910 000

REQUIRED

- (a) **Calculate** the weighted average cost of capital (WACC) of T&T as required by the directors.

[Round the cost of capital and WACC to the nearest two decimal places; and market values to the nearest rand]

(16)

- (b) **Describe** two business risks and two financial risks that T&T is exposed to.

(4)

[20]

QUESTION 34: SIMUNYE GOLD (50 marks)**WEIGHTED AVERAGE COST OF CAPITAL**

Simunye Gold (“Simunye”) is an independent, South African domiciled and focused mining group, which currently owns and operates three underground and surface gold operations in the southern Free State. Simunye owns and operates high quality gold operations in South Africa – consolidated into one group with one vision and strategy. In addition to its mining activities, the group owns and manages significant extraction and processing facilities at its operations, which beneficiate the gold bearing ore mined. Listed on the Johannesburg Stock Exchange, Simunye is the largest individual producer of gold from South Africa and is one of the world’s 10 largest gold producers.

The group is currently under negotiations with a Toronto Stock Exchange listed company One Gold International to acquire its underground and surface operation just 50 kilometres south of Johannesburg. This will increase Simunye's annual gold production, enhancing existing operational flexibility and providing the group with the potential to significantly extend its operating life. Below are three expected outcomes of purchase price (in Canadian dollars – CAD) from the negotiations.

Probability	Bid price (CAD)
20%	25 000 000
50%	60 000 000
30%	50 000 000

Simunye has a target capital structure of 40%: 60% (debt: equity ratio). Ordinary share capital must not exceed 80% of total equity. The debt portion is split 50: 50 between loans and debentures. Loans are to be maintained at the same ratio as they currently are at their carrying values (Ifafa Bank: Netbank). The capital structure as extracted from the company’s latest statement of financial position (28 February 2017) is provided below.

Financing instrument	Notes	Rand (‘000)
Ordinary share capital (96 000 000 shares issued)	1	1 200 000
8,5% Preference share capital	2	240 000
Loan: Ifafa Bank	3	570 000
Loan: Netbank	4	380 000
Debentures: JP Mogano Bank	5	135 000
Total capital employed		2 525 000

Notes

1. Only 96% of the authorised share capital has been issued. A Simunye share is currently trading on the Johannesburg Stock Exchange at R25 (issue costs are estimated at 20 cents). The expected dividend to be declared on 28 February 2018 is 186 cents in line with company's annual growth (recent dividend declared in February 2017 was 169 cents).
2. These irredeemable preference shares pay out a dividend of R20,4m annually and their market value is estimated at R255m.
3. The long-term loan from Ifafa Bank was received on 4 March 2016 (a year ago) at JIBAR + 1% and it will be repaid in two years' time. Loans bearing similar terms are trading at JIBAR + 0,75%.
4. The Netbank loan was issued 3 years ago at JIBAR + 1,25% and the going interest rate for similar loans averages JIBAR + 0,5%.
5. The JP Mogano Bank debentures were issued at the beginning of this current financial year (1 March 2016) and will be redeemed at a premium of 5% on 28 February 2020. The coupon rate on these debentures is 9%, whereas the market rate for similar debentures is 8,5%.

Additional information

- The banks have indicated their willingness to avail their facilities for the funding of One Gold International acquisition. The banks and shareholders will also accept any reduction in capital (through share buyback and loan repayment) if necessary.
- Simunye aims to operate at its maximum ordinary share capital: total equity ratio of 80% where feasible.
- One Canadian dollar (CAD) buys 9,50 South African rand (ZAR) and this exchange rate is expected to remain at these levels for the foreseeable future.
- The relevant JIBAR (Johannesburg Interbank Average Rate) is quoted at 8,25%. All the above loans are referenced to this JIBAR.
- The corporate taxation rate is 28%.

REQUIRED

- a) **Calculate or determine** the relevant **cost of capital** for each of the financing instruments used by Simunye to finance the new acquisition.
(10 marks)
- b) **Calculate** the weighted average cost of capital of Simunye based on its target capital structure.
(7 marks)
- c) **Calculate** the weighted average cost of capital of Simunye based on its existing capital structure (before the new acquisition) using **book values**.
(4 marks)
- d) **Calculate** the probable bid price (R) for One Gold International business to be acquired by Simunye.
(2 marks)
- e) **Determine** how the new acquisition of One Gold International operations should be financed, using where possible available loan facilities and/or a fresh issue of shares.
(11 marks)
- f) **Calculate** the market values for the capital employed by Simunye.
(12 marks)
- g) **Calculate** the weighted average cost of capital of Simunye based on its existing capital structure (before the new acquisition) using **market values**.
(4 marks)
- [50 marks]**

**VALUATIONS
MERGERS & ACQUISITIONS**

QUESTION 35: FAZEBOOK (35 marks)

FazeBook Limited ("FazeBook") is a popular free social networking website that allows registered users to create profiles, upload photos and video, send messages and keep in touch with friends, family and colleagues. The site, which is available in 37 different languages, includes public features such as:

- Marketplace - allows members to post, read and respond to classified ads.
- Groups - allows members who have common interests to find each other and interact.
- Events - allows members to publicise an event, invite guests and track who plans to attend.
- Pages - allows members to create and promote a public page built around a specific topic.
- Presence technology - allows members to see which contacts are online and chat.

Within each member's personal profile, there are several key networking components. The most popular is arguably the Wall, which is essentially a virtual bulletin board. Messages left on a member's Wall can be text, video or photos. Another popular component is the virtual Photo Album. Photos can be uploaded from the desktop or directly from a smartphone camera. An interactive album feature allows the member's contacts (who are generically called "friends") to comment on each other's photos and identify (tag) people in the photos. Another popular profile component is status updates, a micro blogging feature that allows members to broadcast short Twitter-like announcements to their friends. All interactions are published in a news feed, which is distributed in real-time to the member's friends.

Over the past year, the value of FazeBook shares has more than doubled. It has recently made a bid for Wassup Limited ("Wassup"). Wassup has more than 450 million monthly users and is popular with people looking to avoid text messaging charges. If successful it will be the social networking giant's largest acquisition to date. In a statement announcing the proposed deal, FazeBook's founder Faizel Berg described Wassup's services as "incredibly valuable". Wassup allows users to send messages over internet connections, avoiding text messaging fees. The company claims it is currently registering one million new users a day. It makes money by charging users a subscription fee of R1 per year, although it offers a free model as well.

The bid offer is one share in FazeBook Limited for every four shares held in Wassup Limited.

Financial information relating to each company is given below:

Extract from the Statements of Financial Performance for the year ended 30 April 2017

	FazeBook	Wassup
	R'm	R'm
Turnover	<u>1 500</u>	<u>450</u>
Profit before taxation	<u>156</u>	<u>33</u>
Taxation	<u>63</u>	<u>12</u>
Profit after taxation	<u>93</u>	<u>21</u>
Dividends	<u>12</u>	<u>12</u>
Accumulated profit for the year	<u><u>81</u></u>	<u><u>9</u></u>

FazeBook expects that the following specific synergies and related costs will flow from the transaction:

- Some land and buildings of Wassup would be sold for R1 000 000 (after taxation) and do not need to be replaced (the combined entity will have sufficient office space).
- Annual post-taxation wage savings at current prices are expected to be R750 000, while future wage increases are expected to be double the inflation rate for next year and equal to inflation for the following years.
- Fixed advertising and distribution cost savings of R200 000 (before taxation) would apply for next year and for each year thereafter.
- Legal and other acquisition-related costs at present value are expected to amount to R2,5 million (after taxation).

The following additional information is available:

- WACC of Wassup has been estimated at 18%.
- Company income taxation rate is 28%.
- Current rate of inflation is 5% per annum and it is expected to remain at approximately this level in the foreseeable future.
- Unless otherwise mentioned, all fixed expenses are expected to grow by inflation only.

Statements of Financial Position as at 30 April 2017

	FazeBook R'm	Wassup R'm
ASSETS		
Non-current assets	600	300
Current assets	330	175
TOTAL ASSETS	<u>930</u>	<u>475</u>
EQUITY AND LIABILITIES		
Share capital (@ 150c each for both companies)	270	150
Retained earnings	210	135
Total equity	<u>480</u>	<u>285</u>
Non-current liabilities	300	90
Current liabilities	150	100
Total liabilities	<u>450</u>	<u>190</u>
TOTAL EQUITY AND LIABILITIES	<u>930</u>	<u>475</u>
Price earnings ratio (prior to bid)	20	12

REQUIRED

- (a) **Calculate** the present value of all specific synergies between FazeBook and Wassup, net of associated costs.
[Round the saving up to the nearest million rand] (10)
- (b) **Establish** the Rand value of FazeBook offer to Wassup, assuming that the offer made by FazeBook reflects the fair market value of the two businesses. (5)
- (c) **Discuss** when the payment methods of (i) shares; (ii) cash, should be used and the benefit(s) of using each particular method of payment. (5)
- (d) **Calculate** the earnings per share of FazeBook following a successful take-over. (5)
- (e) **State** what investigations you would expect FazeBook to have made prior to instigating the take-over bid. (7)
- (f) Following a series of detailed talks and negotiations between FazeBook and Wassup the board of directors of Wassup has decided that the proposed take-over bid is not in the best interest of Wassup. **Outline** three (3) defensive tactics the directors of Wassup can adopt to resist the proposed take-over. (3)

[35]

QUESTION 36: THE BOLT & NUT ENGINEERING (30 marks)

You are the auditor of The Bolt & Nut Engineering (Pty) Ltd (BNE). BNE has been supplying the construction and mining industry with quality tools and fasteners since 1980. The managing director and sole owner of the company, Mr Dulamo, has received an offer from Nuttech Ltd, a listed company in the same industry as BNE, to purchase all the shares in BNE. The purchase price will be paid through the issuing of ordinary shares of Nuttech Ltd.

The summarised **statement of financial position of BNE at 29 February 2016** was as follows:

	R'million
Assets	
Non-current assets	1 540
Property, plant and equipment	1 110
Investment	430
Current assets	4 520
Inventory	3 270
Accounts receivables	1 250
Total assets	6 060
Equity & liabilities	
Capital & reserves	1 750
Ordinary share capital	10
Retained earnings	1 740
Non-current liabilities	
Long-term loan	530
Current liabilities	3 780
Accounts payables	2 490
Bank overdraft	1 290
Total equity & liabilities	6 060

Additional information:**Investment**

BNE obtained a 60% interest in Nutman (Pty) Ltd in 1986 from Mr de Jager, who still holds the other 40% of the shares.

The summarised **statement of financial position of Nutman (Pty) Ltd at 29 February 2016** was as follows:

	R million
Ordinary share capital	50
Retained earnings	110
	160
Loan from BNE	330
Deferred taxation	100
	590
Property, plant and equipment	250
Net current assets	340

Even though Nutman (Pty) Ltd has not been very profitable for the past five years, and made losses in 2014 and 2015, Mr Dulamo is convinced that the profit of R20 million which was made for the year ended 29 February 2016 is the beginning of a growth period for the company.

Included in property, plant and equipment of R250 million is a plant with a carrying value R200 million and a tax value of R Nil, which has a market value of approximately R500 million. The original cost price of the plant was R550 million. Nutman (Pty) Ltd declared a total dividend of R10 million for the year ended 29 February 2016. It was the first dividend declared in 5 years. The loan from BNE to Nutman (Pty) Ltd bears finance charges at a rate of 10% per annum which is seen to be reasonable for the loan.

The profit history of BNE is as follows:

	2016	2015	2014	2013	2012
Net profit (R million)	440	365	326	294	272
Dividends (R million)	168	146	130	107	91

Nuttech Ltd's shares are currently trading at R45 on the stock exchange (JSE). The company's earnings per share for the year ended 29 February 2016 were 720c, and a dividend of 320c per share was paid.

The finance cost rate on the long-term loan of BNE Ltd is currently 9%, linked to the bank overdraft rate. Accept a rate of taxation of 28%.

REQUIRED

- (a) **Calculate** the value of BNE's investment in Nutman (Pty) Ltd, using the net asset value method. (5)
 - (b) **Perform** the valuation of BNE using the price earnings method and taking into account the investment in Nutman (Pty) Ltd. (9)
 - (c) Use the net asset value method to **check** the reasonableness of the valuation performed in part (b) above. (4)
 - (d) **Draft** an email to Mr Dulamo advising him on the number of shares he should accept for his 100% interest in BNE. (6)
 - (e) **Name** three (3) types of acquisitions and give an example of each. (6)
- [30]**

QUESTION 37: LION BRANDS (50 marks)

Lion Brands Limited (known as “Lion Brands”) is Africa’s leading food manufacturer and continues to aggressively increase its footprints to countries outside the continent. Lion Brands is the third biggest company on the JSE (based on the market capitalisation of approximately R850 billion). The board of directors of the company is in advanced stages of talks with relevant parties to discuss the acquisition of the following entities:

- Ellerine Cookies, a bakery division of Sasco Limited, and
- Twista (Pty) Ltd (“*Twista*”), a carbonated drinks manufacturer owned by Faf Molefe and Marius Rabada

Ellerine Cookies

Ellerine Cookies is currently growing its profits at 80% of the inflation rate as consumers become more health conscious. Revenue has of lately come under immense pressure due to new industry players introducing healthier alternatives. Despite increased input costs following the El Nino effect, the division continues to deliver strong results owing to sound cost control measures being in place. Ellerine Cookies has also managed to service and reduce its debt obligations amid increasing prime lending rate.

The board of directors of Sasco Limited is also considering shutting down the division and moving its operating assets, including its non-current asset portfolio currently worth R300 million, to one of its most profitable divisions, in the event that the deal with Lion Brands falls through. The audited financial statements of Ellerine Cookies are provided below:

Statement of comprehensive income for the year ended 31 December 2016

	R 000
Turnover	178 381
Cost of sales	(102 572)
Gross profit	75 809
Operating expenses	(42 500)
Profit before interest, tax, depreciation and amortisation	33 309
Depreciation and amortisation	(2 992)
Profit before interest and tax	30 317
Interest expense	(4 712)
Profit before tax	25 605
Taxation expense	(6 657)
Profit for the year	18 948

Statement of financial position at 31 December 2016

	R 000
Assets	
Non-current assets	164 124
Current assets	111 033
Inventory	1 831
Trade receivables	63 421
Cash balances and investments	45 781
Total Assets	275 157
Equity and liabilities	
Equity	144 876
Ordinary share capital (R1 each)	60 000
Retained income	84 876
Non-current liabilities	
Long-term loan	40 000
Current liabilities	90 281
Trade payables	61 753
Accruals and provisions	28 528
Total equity and liabilities	275 157

Ellerine Cookies has just won a tender to supply bread to schools in the Ekurhuleni East District with effect from January 2017 until December 2018. The division expects its profits to increase by 20% per annum during this period and thereafter increase at its current growth rate. Ellerine Cookies has committed an investment of R2 million over the next two years in sports development (to be paid in equal instalments at the end of each year). The weighted average cost of capital is estimated at 15%. The free cash flows of the entity approximate the division's net profit after reversing non-cash income and expenses.

Twista

The company is currently owned 2 : 1 by Faf Molefe and Marius Rabada, respectively. Lion Brands has made an offer to buy Faf Molefe's entire stake in the business. *Twista* provides top quality, innovatively flavoured soft drinks to the South African market at a competitive price, all while conducting business in a responsible, fair and environmentally-friendly manner. The competition is rife in the soft drinks industry and companies like *Twista* struggle to penetrate the market due to limited distribution network and high marketing and branding costs. Nonetheless, high margins and relatively low production costs result in good profits for most soft drinks companies. Listed beverage companies have an average earnings yield of 6,25%. A listed share is said to trade at 10% above an unlisted share due to its liquidity (marketability).

The earnings of *Twista* for the past five years are reported below:

R 000	2012	2013	2014	2015	2016
Net profit	2 390	2 545	2 700	3 220	2 650

Earnings reported in the 2015 financial year include an after-tax profit of R400 000 made on sale of a patent. During 2016, the longest-serving managing director of *Twista* resigned and was paid R350 000 (net of tax) for the restraint of trade imposed on the director.

Additional information

- Lion Brands will offer Faf Molefe shares in the company in exchange for his stake in *Twista* as Lion Brands has only issued 34% of the 10 billion authorised shares.
- The general inflation rate is currently at 6,25%.
- There were 366 days in the 2016 financial year.
- The corporate taxation rate is 28%.

REQUIRED

- (a) **Calculate** the following ratios of Ellerine Cookies for the year ended 31 December 2016 and **provide** possible reasons for movement in these ratios (2015 ratios are given below in brackets).

- i). *Operating profit margin (20,2%)*
- ii). *Return on capital employed (14,5%)*
- iii). *Asset turnover (0,8 times)*
- iv). *Inventory turnover (8,8 days)*
- v). *Interest bearing debt to EBITDA (1,5 : 1)*
- vi). *Net interest cover (7,2 times)*

[Round all calculations to the nearest two decimal places. No marks are awarded for simply stating the direction of the movement unless relevant reason is given.]

(Calculations 12 marks; comments 6 marks)

(18)

- (b) **Calculate** the value of Ellerine Cookies' business at 31 December 2016, using the free cash flow (discounted cash flow) method.

(12)

- (c) Use the net asset value method to **check** the reasonableness of the valuation performed in part (b) above and **state** any assumptions made.

(5)

- (d) **Determine** the number of shares Lion Brands should issue in exchange for the stake in *Twista* (use price-earnings multiple method, if necessary).

(15)

[50]

QUESTION 38: CHAPTERS & NOVELS (50 marks)

Chapters & Novels for Africa (trading as “CNA”) is Africa’s largest book and stationery outlet and is listed on the JSE Limited. CNA has stores only in the major cities on the African continent but the company, together with its sector peers, has faced tough competition from online paperless book (e-book) retailers. The project steering committee of CNA has been tasked with the running of two mutually exclusive initiatives to help boost the financial performance of the company. Regarding one of the projects, *Project Thewuka*, the company is looking at investing R78 585 714 into the business of transporting books and stationery to different government schools throughout the continent. CNA already has a very credible and reliable distribution system that covers most parts of Africa, from Cape to Cairo.

The following is an extract from the statement of financial position at 31 March 2017.

	Notes	Rand
Equity and liabilities		
Total equity		80 000 000
Ordinary share capital	1	40 000 000
Retained income		10 000 000
Preference share capital	2	30 000 000
Non-current liabilities		30 500 000
Debentures	3	30 000 000
Deferred tax		500 000
Current liabilities		2 500 000
Trade payables		900 000
Bank overdraft	4	1 000 000
Provisions		600 000
Total equity and liabilities		113 000 000

Notes

- The historical average issue price of ordinary shares is R2,50. The latest share price is R6,50. CNA has recently declared and paid an ordinary dividend of R3 000 000 (from R2 666 667 declared and paid a year ago) in line with its profit growth. The share issue costs approximate 25 cents per share (only for the purpose of calculating cost of equity).
- The company pays a total annual dividend of R3 450 000 on the preference shares. Similar shares are trading at an average of 300 basis points below the prime rate.
- The pre-tax annual interest payment on debentures is R3 450 000. The debentures will be redeemed on 28 March 2020 at a premium of 10% of the capital amount borrowed. The capital will be repaid on 31 March 2020, while the premium will be paid a year later (on 31 March 2021). The going rate in the market for similar debentures is 9%.

4. The bank overdraft bears an average interest rate of 8% per annum. The overdraft is used to bridge the working capital requirements when the need arises, and the balance fluctuates monthly.
5. The company has a target capital structure of 50% equity and 50% debt. Under the target capital structure, ordinary share capital is to be maintained at 80% of total equity.

The second initiative is the reviewing of the working capital management strategy of the company, particularly the credit policy. The following information relates to the **current** credit terms of the company's business:

- i). *Sales for the year amounted to R30 000 000 and were all made on credit.*
- ii). *A standard discount of 2,5% is currently offered to debtors paying within 8 days.*
- iii). *Bad debt expense for the current year was R1 750 000.*
- iv). *Currently, one-fourth of debtors pay within 8 days, while the remaining debtors take 50 days on average to settle their accounts.*

The responsibility of the project steering committee is to advise the senior management whether implementing a new credit policy would be of any benefit to CNA. The **proposed** credit policy entails the following:

- i. *Credit is granted to customers on 3/10 (3% discount on payments made within 10 days) net 40 basis in future. 30% of existing customers will make use of this option, whilst the remaining current debtors will pay on average within credit terms.*
- ii. *Bad debt expense ratio (based on total credit sales) is expected to be 5,5%.*

Additional information

- The prime interest rate is 10,5%.
- Gross profit margin is maintained at 40% throughout the year.
- There are 365 days in the 2017 financial year.
- The corporate taxation rate is 28%.

REQUIRED

- a) **Calculate** the weighted average cost of capital of Chapters & Novels for Africa based on both the current and target capital structure, for the purpose of evaluating the proposed project and **comment** on the differences between these calculations.

[Round rand amounts to the nearest rand and other numbers to the nearest one decimal place.]

(Calculations 22 marks; comments 3 marks) (25)

- b) With supporting calculations, **determine** how *Project Thewuka* should be financed, if the company is working towards the target capital structure.

(Calculations 6 marks; comments 4 marks) (10)

- c) **Advise** the project steering committee whether company should adopt the proposed credit policy or continue with the current one.

[Show all workings starting with the gross profit. Use the weighted average cost of capital based on the current capital structure, where applicable.]

(10)

- d) **Describe** some of the risks faced by Chapters & Novels for Africa.

(5)

[50]

QUESTION 39: NEW MUTUAL (30 marks)**FINANCIAL ANALYSIS**

You have just been appointed the Head: Telecommunications Equity Fund at one of the leading investment houses in South Africa, New Mutual Investment Group ("New Mutual"). Your team's mandate is to keep abreast of developments in the telecommunications industry and advise the investment committee whether to buy, sell or hold shares in the relevant companies. New Mutual already has exposure in this industry through an 8,75% shareholding in MTM Group Limited ("MTM"), a leading emerging markets mobile operator. MTM's share price has come under a lot of pressure lately due to hefty fines imposed on its subsidiaries, as well as growing competition in the sector. However, MTM continues to deliver solid results mainly due to its robust cost control measures and the weakening rand (for its foreign subsidiaries). The junior analyst in your team has already provided you with MTM's key ratios for the year ended 30 September 2016 (see below).

You have been tracking Hola Limited ("Hola") share performance for a while now, and you are convinced the company has got the right strategy to grow its business to rival MTM locally and in the other parts of Africa. Hola is the sixth biggest network provider in the SADC region and, just like MTM, is listed on the Johannesburg Stock Exchange. The company offers fixed line, mobile, ICT and data services to business and consumer markets. Hola has just won a R2 billion tender to supply qualifying government employees with contract packages and this is expected to increase its clientele of 2,8 million active customers by at least 15%. Looking at its primary performance indicators, you are convinced that buying Hola shares would be a great investment for New Mutual. MTM has also given its shareholders (including New Mutual) a good return over the years and you are also considering increasing New Mutual's exposure in MTM.

An extract from the **annual report of Hola Limited at 30 September 2016** shows the following:

Statement of comprehensive income	R million
Net revenue	37 325
EBITDA	8 761
Finance charges	1 060
Profit before taxation	2 900
Profit for the year	2 043

Statement of financial position	R million
Non-current assets	33 875
Cash and cash equivalents	2 548
Trade and other receivables	7 375
Other current assets	2 989
Share capital	6 888
Long-term loan	7 104
Trade and other payables	12 259
Current portion of the long-term loan	817
Retained income	19 179

The information below relates to the **share history and dividends declared by Hola Limited:**

Performance	2016
Weighted average number of shares (million)	505
Share price - low (cents)	5 141
Share price - high (cents)	6 007
Share price - opening (cents)	5 283
Share price - closing (cents)	5 885
Share price - average (cents)	5 529
Dividends declared - interim (R million)	280
Dividends declared - final (R million)	640

Below are the ratios for MTM Group Limited calculated for the year ended 30 September 2016:

Ratios

(a) Dividend yield (%)	2,79
(b) Price-earnings ratio (times)	13,06
(c) Net interest-bearing debt to equity ratio (x: 1)	0,16: 1
(d) Return on assets (%)	12
(e) Effective taxation rate (%)	35,79
(f) EBITDA per customer (R)	3 680
(g) Change in share price (%)	(2,27)

Additional information

- In computing ratios, New Mutual uses closing balances and book values, unless where stated otherwise.
- The South African corporate tax rate is 28%.

REQUIRED

- (a) **Draft** a memorandum to the investment committee of New Mutual advising whether to invest in Hola Limited or to increase its investment in MTM Group Limited, by **comparing** the two companies' ratios computed.

[Round all calculations to the nearest two decimal places]

(Calculations 15 marks; comments 7 marks; and presentation 2 marks)

(24)

- (b) **Identify** key risks faced by the South African telecommunications companies that the investment committee of New Mutual should be aware of.

(6)

[30]

QUESTION 40: KINGSTON (25 marks)**WEIGHTED AVERAGE COST OF CAPITAL**

Kingston Ltd is a medium size manufacturing business that is highly dependent on electricity for production. Due to the recent load shedding, the production and profit of the company is under massive strain. The directors have decided to invest in a solar power system as an alternative energy source, to minimise the impact of load shedding on the business as there is no other short to medium-term solution to the national electricity crisis. The project cost is estimated at R13 000 000 and will commence as soon as the funding of the project is confirmed. In order to evaluate the feasibility of the project, the company needs to establish the company's weighted average cost of capital.

The following is an extract from the statement of financial position at 31 March 2016.

	Notes	Rand
Equity and Liabilities		
Total equity		65 000 000
Ordinary share capital	1	40 000 000
Non-distributable reserves		15 000 000
Retained income		10 000 000
Non-current liabilities		26 500 000
12% Debentures	2	16 000 000
Long-term loan	3	10 000 000
Deferred tax		500 000
Current liabilities		2 500 000
Trade payables		1 900 000
Provisions		600 000
Total equity and liabilities		94 000 000

Notes

- The historical average issue price of ordinary shares is 250 cents. The latest known share price is 625 cents. Kingston Ltd has just declared and paid a dividend of 25 cents. In line with its stable annual growth, the company is expecting to declare a dividend of 28 cents for the year ended 31 March 2017.

The government bonds (risk-free rate) currently yield 7%, and the company's beta is estimated at 1,2 while the market risk premium 7,9%.
- Similar debentures are trading at 10% per annum. The interest is payable annually in arrears and redemption date of these debentures is 31 March 2021.
- The long-term loan is repayable in three years' time and carries an interest rate of prime rate-1%. The current prime rate is 10,5%. Similar loans trade at prime rate+2%.

Additional information

- The current effective tax rate is 28%. All percentages given are before tax, unless where otherwise stated.

REQUIRED

- a) Calculate the cost of debt (loan). (2)
- b) Calculate the cost of debt (debentures). (2)
- c) Calculate the cost of equity, using both the Gordon's Dividend Growth and Capital Asset Pricing models. (6)
- d) Calculate the market value of a loan (4)
- e) Calculate the market value of debentures. (4)
- f) Calculate the market value of equity. (4)
- g) Calculate the weighted average cost of capital. (3)

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