



UNIVERSITY
OF
JOHANNESBURG

Department of Commercial Accounting

Financial Management 3B

BFB33B3

Last Assessment Opportunity

NOVEMBER 2014

Time: 3 hours

Marks: 100

Assessors: Mrs L Boyce

Internal moderator: Mr M Booyens

External moderator: Ms R van den Berg

INSTRUCTIONS:

- This paper consists of 14 pages (including the cover page).
- Answer all questions. Show all calculations and workings clearly.
- Silent, non-programmable calculators may be used.
- Round all calculations to two decimal places, unless stipulated otherwise.
- **INDICATE YOUR INDEX NUMBER (FROM THE CLASS LIST) IN THE TOP MIDDLE OF YOUR SCRIPT.**

| QUESTION | TOPIC | MARKS | TIME |
|----------|---|------------|--------------------|
| 1 | Time value of Money | 20 | 36 minutes |
| 2 | Bonds, Share valuations and cost of capital | 20 | 36 minutes |
| 3 | Risk and Return | 20 | 36 minutes |
| 4 | Financial Statements and Financial Statement Analysis | 20 | 36 minutes |
| 5 | Working Capital Management | 20 | 36 minutes |
| | | 100 | 180 minutes |

QUESTION 1

(20 MARKS)

QUESTION 1.1

(2 marks)

Michael is currently 23 years old and plans to retire at the age of 60. He contributes R2 500 per annum towards a retirement annuity that pays an interest rate of 10% per annum.

REQUIRED:

Calculate the value of the investment when he turns 60.

(2)

QUESTION 1.2

(9 marks)

Pearl's mother applied for a personal loan from her bank to fund a portion of Pearl's university fees. Her repayment is R1 500 per month. The interest on the loan is 12% nominal annual compounding monthly. The term of the loan is 12 months.

REQUIRED:

- a) Calculate the value of the loan at inception. (2)
- b) Complete the amortisation table for the first 2 months as in the following format: (7)

| Month | P1 | P2 | Instalment | Capital Paid | Interest Paid | Accumulated Interest Paid | Closing Bal |
|-------|----|----|------------|--------------|---------------|---------------------------|-------------|
| 0 | | | - | - | - | - | |
| 1 | | | R1 500 | | | | |
| 2 | | | | | | | |

QUESTION 1.3

(2 marks)

Mzala needs R3 500 in 5 years' time to pay for a trip to Cape Town. He has R2 000 that he can invest today. He is shopping for a bank that will offer him the best interest rate to raise the funds that he needs.

REQUIRED:

- a) Calculate the interest rate that he will need to earn. (2)

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QUESTION 1.4

(5 marks)

Luyolo currently has R3 000 that he wants to invest and needs to raise R10 000. He can earn an interest rate of 9% nominal annual compounding semi-annually.

REQUIRED:

- a) Calculate how long he needs to invest (in years) in order to achieve his target. (3)
 - b) Calculate the effective interest rate. (2)
-

QUESTION 1.5

(2 marks)

You have decided to fund the tuition fees of the top students from each grade from your former high school. The fees per annum amount to R25 000 in total and you expect that they will increase at 5% per annum.

REQUIRED:

- a) Calculate how much you need to donate to the school to start a fund for the fees assuming you can earn interest at 10% per annum. (2)
-

QUESTION 2**(20 MARKS)****QUESTION 2.1****(10 MARKS)**

Answer the following multiple choice questions by selecting the most correct answer.

2.1.1 A bond that does not earn any coupon payments during its term is called a: (1)

- A. Zero coupon bond
- B. Discount bond
- C. Inflation-linked bond
- D. A & B
- E. None of the above

Use the following information to answer questions 2.1.2 to 2.1.4

Company Y has issued a bond that earns coupon payments at a rate of 9% semi-annually. The yield to maturity is 10%. The bond matures in 10 years' time. The nominal value of the bond is R1 500.

2.1.2 The coupon payment per period is equal to: (1)

- A. Zero
- B. R67.50
- C. R135
- D. R150
- E. None of the above

2.1.3 The bond is trading at a: (1)

- A. Discount
- B. Premium
- C. Par
- D. None of the above

2.1.4 The price of the bond will be: (1)

- A. Higher than the nominal value of the bond
- B. Equal to the nominal value of the bond
- C. Lower than the nominal value of the bond
- D. None of the above

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- 2.1.5 PEP Boutique has just paid a dividend of R2 per share. The dividend is expected to grow at a constant rate of 10% per annum. Investors require a 12% rate of return on the investment. The intrinsic value per share is closest to: (2)
- A. R20
 - B. R110
 - C. R100
 - D. 18.33
 - E. None of the above
- 2.1.6 The CEO of Mixit needs to calculate the cost of ordinary shares. The risk free rate is currently 9%. Mixit has a beta of 1,1. The return on a market portfolio is 11%. The required rate of return for the ordinary share of Mixit is closest to: (2)
- A. 11.2%
 - B. 6.8%
 - C. 12.1%
 - D. 4.8%
 - E. None of the above
- 2.1.7 When making investment decisions, investors should only invest in the shares of a company where: (1)
- A. The expected return is lower than the required return
 - B. The expected return is equal to the required return.
 - C. The shares are over valued
 - D. The expected return is higher than the required return
 - E. None of the above
- 2.1.8 An equity instrument held by an investor that has no voting rights at an annual general meeting but receives preferential treatment when it comes to distributions of a company's profits and assets in the event of liquidation is called a/an: (1)
- A. Ordinary share
 - B. Cumulative preference share
 - C. Participating preference share
 - D. B and C
 - E. None of the above

QUESTION 2.2

(10 MARKS)

PART 1

(6 marks)

Mapantsula Ltd needs to raise capital for infrastructure upgrade for the company. Management is considering 2 options.

Option 1

Issue an 8% non-redeemable debenture with a par value of R1 000. The debenture is currently trading at a value of R900. The company tax rate is 28%.

Option 2

Issue a redeemable 7% preference share with a par value of R100 that is trading at R90 per share. The preference share is redeemable in 5 years' time.

REQUIRED:

- a) Calculate the cost of the debenture. (3)
- b) Calculate the cost of the redeemable preference share (3)

PART 2

(4 marks)

Mapantsula also needs to calculate its weighted average cost of capital. Management has provided you with the following information

REQUIRED:

- a) Calculate the weighted average cost of capital by completing the following table. (4)
Present your answer by writing the missing letter (A) followed by your calculation and answer.

| Component | Market value | Weight | After-tax cost | Contribution to WACC |
|-------------------|--------------|-------------|----------------|----------------------|
| Ordinary shares | R500 000 | 50% | 12% | D |
| Preference shares | R150 000 | B | 7% | 1.05% |
| Debentures | R350 000 | 35% | C | 3.5% |
| | A | 100% | | 10.55% |

QUESTION 3

(20 MARKS)

QUESTION 3.1

(2 marks)

Mr Peabody invested in a company when the share price was R50 one year ago. During the year he received a dividend of R2,50. The closing price of the share one year later was R65.

REQUIRED:

- a) Calculate the one year holding period return of the share. (2)

QUESTION 3.2

(10 marks)

| Investment | 2011 | 2012 | 2013 | Average return | Standard Dev |
|-------------|------|------|------|----------------|--------------|
| Caltrex Oil | 12% | 10% | 11% | ? | 1% |
| Sasil Oil | 8% | 9% | 10% | 9,33% | ? |

REQUIRED:

- a) Calculate the historic average return for **Caltrex Oil** over the 3 year period using the arithmetic mean method. (2)
- b) Calculate the standard deviation for **Sasil Oil** using the average return which has been calculated using the geometric mean method. (5)
- c) Which investment would you select if the coefficient of variation of **Caltrex Oil** was **0,09** and **Sasol Oil** is **1,63**. Motivate your answer. (2)
- d) What would you expect the correlation coefficient of the two companies to be: closer to +1 or -1. (1)

QUESTION 3.3

(8 marks)

Maxine held the following investments in her portfolio prior to the mine strikes that hit the South African economy.

| Company | Investment |
|-------------|------------|
| Truworths | R9 600 |
| Pick 'n Pay | R25 200 |
| Gold Fields | R15 600 |
| Vodacom | R9 600 |

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Due to the strike taking longer than expected she decided to change the weighting of the investments in the portfolio as follows:

| Company | Investment | Expected return |
|-------------|------------|-----------------|
| Truworths | 25% | 12% |
| Pick 'n Pay | 50% | 10% |
| Vodacom | 25% | 13% |

The required rate of return for the portfolio is 10%.

REQUIRED:

- a) Calculate the weight of each investment prior to the strike. (2)
 - b) Calculate the expected return of the portfolio after the adjustment of the weights portfolio. (2)
 - c) Using your answer in b) would you advise Maxine to invest in the adjusted portfolio?
Motive your answer? (2)
 - d) Is the portfolio diversified? Motivate your answer. (2)
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QUESTION 4**(20 MARKS)****QUESTION 4.1****(10 marks)**

You have been provided the following extract of the financial statements of Belle CC as your first assignment in the internship programme. The previous intern could not complete some of the missing information.

| | 2014 |
|--------------------------|--------------|
| Revenue | A |
| Cost of sales | (19 758) |
| Gross profit | 6 526 |
| Operating income | 136 |
| Operating costs | B |
| Operating profit | 3 613 |
| Investment income | C |
| Financial costs | (1 087) |
| Profit before tax | 3 533 |
| Tax for the period | (653) |
| Profit after tax | 2 880 |
| Minority interest | (3) |
| D | E |
| Ordinary dividends | (1 306) |
| Retained earnings | 1 571 |

| | |
|----------------------------|--------|
| Non-current assets | 13 004 |
| Inventories | 2 602 |
| Receivables | 13 159 |
| Cash and cash equivalents | 3 110 |
| Total assets | 31 875 |
| Current liabilities | 15 784 |
| Deferred tax liabilities | 882 |
| Pension liabilities | 289 |
| Other provisions | 515 |
| Mortgage debt | 352 |
| Bank loans | 3 465 |
| Finance lease liabilities | 15 |
| Prepayments from customers | 275 |
| Other liabilities | 385 |
| Long-term liabilities | 6 178 |

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REQUIRED:

- a) Calculate the missing elements of the Statement of Comprehensive income for Belle CC.
Write down the letter followed by the calculation and final answer (e.g. A = $12 + 6 = 8$). (5)
- b) Calculate total current assets. (1)
- c) Calculate total equity. (1)
- d) Name two items that may be included as part of equity in the Statement of Financial Position. (2)
- e) Explain what is meant by the term “**non-current**” asset or liabilities. (1)

QUESTION 4.2

(10 marks)

The financial manager has also handed you financial information from previous years and asked you to populate the missing information in relation to financial statement analysis.

| | R'm | 2009 | 2010 | 2011 | 2012 | 2013 |
|--|-----|---------------|---------------|---------------|---------------|---------------|
| INCOME STATEMENT | | | | | | |
| Revenue | | 23 134 | 20 186 | 21 998 | 26 284 | 26 923 |
| Gross profit | | 5 406 | 5 207 | 5 734 | 6 526 | 5 209 |
| Earnings before amortisation and impairment of intangible assets (EBITA) | | 2 503 | 2 177 | 2 405 | 2 559 | 977 |
| Earnings before interest and tax (EBIT) | | 2 261 | 1 990 | 2 171 | 2 041 | (339) |
| Earnings before tax (EBT) | | 2 108 | 1 872 | 2 070 | 1 961 | (600) |
| Earnings (loss) after tax | | 1 664 | 1 278 | 1 437 | 1 303 | (784) |
| | | | | | | |
| | R'm | 2009 | 2010 | 2011 | 2012 | 2013 |
| BALANCE SHEET | | | | | | |
| Non-current assets | | 8 464 | 9 240 | 10 795 | 13 004 | 12 120 |
| Current assets | | 13 438 | 13 359 | 14 745 | 17 327 | 15 208 |
| Assets held for sale | | - | - | - | 1 544 | - |
| Total assets | | 21 902 | 22 599 | 25 540 | 31 875 | 27 328 |
| Equity | | 6 627 | 8 139 | 8 907 | 9 419 | 6 922 |
| Long-term liabilities | | 3 338 | 3 145 | 3 533 | 6 178 | 7 284 |
| Short-term liabilities | | 11 937 | 11 315 | 13 100 | 16 278 | 13 122 |
| Total equity and liabilities | | 21 902 | 22 599 | 25 540 | 31 875 | 27 328 |

| Additional information | 2009 | 2010 | 2011 | 2012 | 2013 |
|--|-------------|-------------|-------------|-------------|-------------|
| Closing share price | 367.0 | 532.0 | 337.5 | 327.2 | 296.1 |
| Number of shares (millions) | 53.20 | 53.20 | 53.20 | 53.20 | 53.20 |
| Market capitalisation (millions) | 19 524 | 28 302 | 17 955 | 17 | 16 |
| Dividend to ordinary shareholders (millions) | 372 | 479 | 479 | 479 | 106 |
| Price earnings ratio (times) | 11.73 | 22.15 | 12.49 | 13.36 | -20.09 |

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REQUIRED:

PART A

(6 marks)

Calculate the following ratios:

- a) Dividend per share for 2013. (2)
- b) Earnings per share (EPS) for 2012. (2)
- c) Market capitalisation to book value for 2011. (2)

PART B

(4 marks)

- a) Explain the term market capitalisation. (2)
- b) Interpret your observations of the movement in the earnings per share ratio with special reference to 2013. (2)

QUESTION 5**(20 MARKS)****QUESTION 5.1****(6 marks)**

Dian sells handmade handbags that she orders from the rural areas of the Eastern Cape. On average the annual demand is 200 hand bags. It takes 20 days from date of order to receive her handbags from the suppliers. The cost of placing the order is R25 and annual storage costs per unit are R75. Dian operates for 360 days a year.

REQUIRED:

- a) Calculate the re-order point. (2)
- b) Calculate the economic order quantity. (2)
- c) Describe two important reasons for management of inventory (2)

QUESTION 5.2**(4 marks)**

The accounts payment period for the **current period** of Credit.Com is 90 days, average collection period is 45 and inventory turnover is 5.

The **prior year** the net operating cycle was 50 days and accounts payment period was 70.

Credit.Com operates for 365 days per annum.

REQUIRED:

- a) Calculate the average age of inventory (AAI) for the **current year**. (2)
- b) Calculate the cash conversion cycle for the **prior year**. (2)

QUESTION 5.3**(5 marks)**

Your first assignment at your new job is the management of cash. The manager has informed you that the average sales per annum is R1 200 000. The cash conversion cycle amounts to 50 days. However he is unsure as to how this information can be used to make decisions about his cash management.

REQUIRED:

- a) Calculate the approximate investment in the cash conversion cycle assuming 360 days per annum. (2)
- b) How can the company improve its cash conversion cycle days? (3)

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QUESTION 5.4**(5 marks)**

Match the description in column two to the working capital term in the fourth column (e.g. Y=2)

| | Description | | |
|----------|--|----------|-----------------------|
| A | Ability to use available funds to service debt | 1 | Character |
| B | Assets used as security for a loan | 2 | Capacity |
| C | Details of the credit agreement and credit policy | 3 | Capital |
| D | Reputation for payment of debt | 4 | Collateral |
| E | Availability of deposit to be used as an investment to lessen chances of default | 5 | Conditions |
| F | Analysis of outstanding debt and the length of time since credit extension | 6 | Cash conversion cycle |
| | | 7 | Debtor age analysis |
| | | | |

TOTAL MARKS = 100