UNIVERSITY OF ESWATINI

DEPARTMENT OF BUSINESS ADMINISTRATION

MAIN EXAMINATION PAPER DECEMBER 2018

DEGREE AND YEAR OF STUDY	:	MASTER OF BUSINESS ADMINISTRATION
TITLE OF PAPER	:	ADVANCED CORPORATE FINANCE
COURSE CODE	:	ACF643
TOTAL MARKS	:	100 MARKS
TIME ALLOWED	:	THREE (3) HOURS

INSTRUCTIONS :

1 This paper consists of **nine (9) numbered pages**, including this page and Appendix A which contains useful formulae.

2. There are five **(5)** questions of 25 marks each, answer **<u>ANY FOUR</u> (4)** questions.

3. Begin solution to each question on a new page.

4. Show all the necessary workings.

5. Round off as you deem appropriate.

Note: You are reminded that in assessing your work, account will be taken of accuracy of the language and general quality of expression, together with layout and presentation of your answer.

THIS PAPER MUST NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR OR SUPERVISOR.

SPECIAL REQUIREMENT: FINANCIAL CALCULATOR

Question 1

The latest abridged financial statements of BCB (Pty) Ltd are presented below:

BCB (PTY) LTD STATEMENT OF COMPREHENSIVE INCOME FOR THE TRADING YEAR ENDING 31 OCTOBER 2018

	E
Sales	150 000
Less Cost of goods sold	100000
Gross Profit	50 000
Less operating expenses	20 000
Profit before interest and tax	30 000
Less Interest	5 000
Profit before tax	25 000
Less taxes	7 000
Net Profit, after tax	18 000
Dividend	9 000
Retained earnings	9 000

BCB (PTY) LTD STATEMENT OF FINANCIAL POSITION AS AT 31 OCTOBER 2018

	E
Equity	50 000
Ordinary Share Capital	35 000
Retained earnings	15 000
Liabilities	38 000
Long-term debt	15 000
Short-term debt	9 000
Accruals	4 000
Accounts payable	10 000
Total equity & Liabilities	88 000
Assets	
Net non-currents assets	42 000
Current assets	46 000
Inventory	16 000
Accounts receivable	20 000
Cash	10 000
Total Assets	88 000

The company has been awarded several large contracts and is anticipating a growth rate of 30% in sales for the financial year ending 31 October 2019.
Assume the following additional information for the 2019 financial year:

- All assets (except accounts receivable), cost of sales, operating costs, accruals and accounts payable will increase at the same rate as sales.
- Accounts receivable will be doubled in 2019.
- The interest expense will remain unchanged in 2019 while the tax **rate** will be 30% in

2019.

- The dividend payout **ratio** will be reduced to 40% in 2019.
- The company's Chief Finance Officer (CFO) has decided that additional finance required to sustain the growth, will be raised as follows :
  - Overdraft funds first, with the firm's new Current Ratio not falling below 2:1,
  - Long-term debt second, with the debt ratio not exceeding 45% and
  - Ordinary Share Capital, only if necessary, thereafter.

Required:
Use the percentage of sales approach along with the above instructions to complete a Pro Forma Statement of Comprehensive Income and Pro Forma Statement of Financial Position, and to determine the extra financing needed (EFN) to achieve the targeted level of growth in 2019. Show all your workings.

Use Appendix B provided on page 9 of your exam paper to complete the Pro Forma Statement of Comprehensive Income and Pro Forma Statement of Financial Position. Detach Appendix B from the exam paper and place it in your answer book. Write your student number in the space provided.

(25 marks)

QUESTIONS 2

Eco-wise Limited has a history of extraordinary growth but its growth is now slowing down because it is becoming a much larger company and its products are maturing and facing competition. The company pays very low dividends but has more free cash flows to equity (FCFE). The FCFE is likely to increase as the firm gets larger and the growth rate becomes moderate. The financial leverage is stable (not changing).

Background information as	**2018**
Revenue per share 2017	E40
Earnings per share	E15
Capital expenditure per share	E 5
Depreciation per share	E1.50

Inputs for the high growth	
Duration of the high growth	4 years
Return on Equity (ROE)	22%
Retention ratio	95%
Beta	1.8
Treasury bills rate	15%
Return on the market	27%
Working capital requirements	20% of revenues
Optimal debt ratio	5%

Inputs for the stable growth period	
ROE	30%
Retention ratio	50%
Beta	1.10
Treasury bills rate	15%
Return on the market	27%
Working capital requirements	20% of revenues
Optimal debt ratio	5%

Required:

Calculate Eco-wise Limited's value per share using the Free Cash flow to Equity (FCFE) approach.

(25 marks)

Question 3

Covenant Financial Services Limited (CFSL) is a local financial services firm specializing in bridging finance. CFSL is listed on the Eswatini Stock Exchange and is expecting a high growth rate in earnings in excess due to rapidly growing market share. You are given the following information about CFSL and the local financial market.

CFSL has the following characteristics	
Earnings before interest and tax (EBIT)	E 4 000 000
Capital expenditure	E 6 000 000
Revenues	E 12 000 000
Depreciation	E 3 500 000
Working capital requirements	25% of revenues

Inputs for the high growth

Duration of the high growth	3 years
Equity beta	1.5
Treasury bills rate	4.36%
Market risk premium	7.5%
Tax	30%
Optimal debt ratio	40%
Pre-tax cost of debt	6%

EBIT, Revenues, Capital expenditure and depreciation growth rate 25%

Inputs for the stable growth period

EBIT and Revenues growth	5%
Working capital requirements	25% of revenues
Equity beta	1.1
Treasury bills rate	5%
Market risk premium	7.5%
Optimal debt ratio	40%

Additional information

- CFSL has total assets worth E50 000 000.
- The probability of bankruptcy is estimated at 0.25%.
- The cost of bankruptcy is expected to be 25% of the unlevered firm value.

Required:
Calculate the value of CFSL today using the Adjusted Present Value approach.

(25 marks)

Question 4

Glo Plastics Limited (GPL) is expecting growth rate in earnings in excess of 60% due to its high growth rate and market share. The firm pays no dividends but has negative free cash flow due to high capital expenditure and working capital requirements. The firm has little debt in its capital structure and does not plan to change this in the near future.

Current information

Revenue per share	E50
Earnings per share	E15
Capital expenditure per share	E20
Depreciation per share	E5
Working capital requirements	25% of revenues

Item	High growth	Transition period	Stable growth
Duration	3	3	Forever
Retention ratio	100%		
Earnings growth	50%	*1	5%
Revenues growth	50%	50%	5%
Beta	2.0	1.5	1.00
Working capital requirements	20% of revenues	20% of revenues	20% of revenues
Optimal debt ratio	10%	20%	40%
Capital expenditure	50%	40%	*2
Depreciation	50%	45%	*2

Additional information

- *1Growth in earnings will decline linearly by 10% as follows year 3 =50% year 4 = 40% year 5 =30% and year 6 =20%
- *2 CAPEX will be offset by depreciation
- The applicable Treasury bills rate is 4% and the Return on the market is 8.5%.

Required:

Calculate the value of Glo Plastics using the relevant approach.

(25 marks)

Question 5

Computronix is working on acquiring a rapid growth software company, Advanced Technology Corporation.

Advanced Technology Corporation has 10 million shares in issue with a total market value of E130 000 000, and an equity beta of 1.5.

Post-acquisition, Computronix expect Advanced Technology to start generating positive incremental after-tax cash flows of E12 million at the end of the fourth year. These positive cash flows should grow at a rate of 25 percent per year during years 5 and 6, and at a constant rate of 10 percent per year thereafter.

If the acquisition goes ahead, Computronix will increase Microchip's debt ratio from 0.25 to 0.45, and this increase will provide an annual perpetual interest tax shield of E1 000 000. The applicable cost of debt is 10%.

The expected return on the market is 12% and the risk free rate is 7%. The corporate tax rate, payable by both companies, is 30%.

Computronix has 60 million shares and each share is currently trading at E10 each.

Required:

(a) Calculate the discount rate Computronix should use in valuing Microchip's incremental cash flows.

(6 marks)

(b) Calculate the value of the incremental after-tax cash flows and the interest tax shield of acquiring Microchip.

(8 marks)

(c) Calculate the maximum cash price that Computronix would be willing to offer for each Advanced Technology share.

(3 marks)

(d) If Computronix decides to offer E180 million worth of newly-issued shares in the post-merger company instead of cash, calculate the exchange ratio that should be offered to Microchip's shareholders.

(8 marks)

APPENDIX A: SELECTED RATIOS AND FORMULAE

Quick Ratio = (Current Assets – Inventory) / Current Liabilities

ROA = NPAT / Total Assets

Current Ratio = Current Assets / Current Liabilities

Equity Multiplier = Total Assets / Equity

Net Profit Margin = NPAT / Sales

Total Debt ratio = Total debt / Total Assets

ROE = NPAT / Equity

Debt: Equity ratio = Total Debt / Total Equity

Total Asset Turnover = Sales / Total Assets

ROE = PM x TAT x EM

FV of a lump sum $= PV \times (1 + r)^t$ **PV of a lump sum** $= FV / (1 + r)^t$

Bond Value $= C \times [1 - 1/(1 + r)^t] / r + F/(1 + r)^t$

$P_0 = D_1 / (1 + r) + D_2 / (1 + r)^2 + \ldots\ldots Dt / (1 + r)^t + P_t / (1 + r)^t$

$$R_E = \frac{D_0 (1 + g)}{P_0} + g$$

$R_P = D / P_0$

$P_t = D_{t+1} / (R - g)$

$$\text{WACC} = \left(\frac{E}{V} \times R_E\right) + \left(\frac{P}{V} \times R_P\right) + \left(\frac{D}{V} \times R_D \times (1 - T_c)\right)$$

$$R_E = R_F + \beta_E \times (R_M - R_F)$$

$$YTM = \frac{i + (F_d - V_d)/n}{(F_d + 2V_d)/3}$$

- $$\beta_{ASSET} = \frac{\beta_{EQUITY}}{1 + [(1 - T_C)(D/E)]}$$

- $$\beta_{EQUITY} = \beta_{ASSET}\ x \left(1 + \left((1 - T_C)\ x\ \frac{Debt}{Equity}\right)\right)$$

- $$\alpha = \frac{\text{No. of new shares issued}}{\text{No. of old shares + No. of new shares issued}}$$

APPENDIX B

Question 1

STUDENT NUMBER ____________________

BCB (PTY) LTD PRO FORMA STATEMENT OF COMPREHENSIVE INCOME FOR THE TRADING YEAR ENDING 31 OCTOBER 2019

Sales	
Less Cost of goods sold	
Gross Profit	
Less operating expenses	
Profit before interest and tax	
Less Interest	
Profit before tax	
Less taxes	
Net Profit, after tax	
Dividend	
Retained earnings	

BCB (PTY) LTD PRO FORMA STATEMENT OF FINANCIAL POSITION AS AT 31 OCTOBER 2019

Equity	
Ordinary Share Capital	
Retained earnings	
Liabilities	
Long-term debt	
Short-term debt	
Accruals	
Accounts payable	
Total equity & Liabilities	
Assets	
Net non-currents assets	
Current assets	
Inventory	
Accounts receivable	
Cash	
Total Assets	

DO NOT FORGET TO DETACH THIS APPENDIX B AND INSERT IT IN YOUR ANSWER BOOK. WRITE YOUR STUDENT NUMBER LEGIBLY THEREON.