# ПATIBIA UחIVERSITY <br> OF SCIEПCE AПD TECHПOLOGY 

## FACULTY OF MANAGEMENT SCIENCES

DEPARTMENT OF ACCOUNTING, ECONOMICS AND FINANCE

| QUALIFICATION: BACHELOR OF ACCOUNTING |  |
| :--- | :--- |
| QUALIFICATION CODE: 07BAC | LEVEL: 7 |
| COURSE CODE: MFN710S | COURSE NAME: MANAGERIAL FINANCE 320 |
| SESSION: JANUARY 2020 | PAPER: THEORY AND CALCULATIONS |
| DURATION: 3 HOURS | MARKS: 100 |


| SECOND OPPORTUNITY EXAMINATION QUESTION PAPER |  |
| :--- | :--- |
| EXAMINER(S) | E. Mushonga and L. Odada |
| MODERATOR: | A. Mokosa |

## INSTRUCTIONS

1. Answer ALL the questions in blue or black ink only. STRICTLY NO PENCIL
2. Start each question on a new page, number the answers correctly and clearly.
3. Show all your workings/calculations and round all calculations to two decimal places
4. Questions relating to this examination may be raised in the initial 30 minutes after the start of the paper. Thereafter, candidates must use their initiative to deal with any perceived error or ambiguities and any assumptions made by the candidate should be clearly stated.

## PERMISSIBLE MATERIALS

- Silent, non-programmable calculators

THIS QUESTION PAPER CONSISTS OF _4_PAGES (Including this front page)

An investor wishes to invest in two shares that have the following risk/return profiles:

| Economic State | Probability | Return <br> Share A | Return <br> Share B |
| :---: | :---: | :---: | :---: |
| 1 | 0.3 | $2 \%$ | $15 \%$ |
| 2 | 0.5 | $10 \%$ | $22 \%$ |
| 3 | 0.2 | $12 \%$ | $-2 \%$ |

The following market information is available:

- The risk-free rate is $3 \%$
- The Market return is $12 \%$
- The standard deviation of expected market returns is $6 \%$
- The covariance of share A returns with those of the market is 25.2
- The covariance of share $B$ returns with those of the market is 39.6

Required:
a) Calculate the expected returns of shares $A$ and $B$; the covariance of returns between the two shares, standard deviations and the correlation between share $A$ and share $B$.
b) Determine the expected return of a portfolio consisting of $40 \%$ share $A$ and $60 \%$ share $B$ together with the risk of the portfolio and discuss whether you would advise the investor to purchase the portfolio.
c) Calculate the required return of shares $A$ and $B$ according to the Capital Asset Pricing Model, and discuss whether you would advise the investor to invest in either share $A$ or share $B(10)$

## QUESTION 2

Palma Ltd, a manufacturer of games accessories and boys toys, is engaged in rapid expansion. Management has been advised that discounted cash flow techniques provide the most acceptable appraisal methods for their needs.

Palma Ltd has the following extract from its financial position:

|  | $N \$ 000$ |  |
| :--- | ---: | ---: |
| Authorised share capital | $15000000 @ 50 \mathrm{c}$ | $\underline{7500}$ |
| Issued share capital | $10000000 @ 50 \mathrm{c}$ | 5000 |
| Share premium | 2340 |  |
| Revaluation reserve | 1610 |  |
| Other reserves | $\underline{4615}$ |  |
| Shareholders' funds | $\underline{13565}$ |  |
|  |  |  |
| 12\% N\$100 irredeemable debentures | N\$000 |  |
| $10 \%$ N\$100 redeemable debentures | 2500 |  |
| $14 \%$ Long term loan | $\underline{3000}$ |  |
|  | $\underline{7500}$ |  |

Palma Ltd.'s shares have a current market value of $N \$ 1.56$ cum div. A dividend of 18 c is due to be paid shortly. All debt interest is paid annually in arrears and has just been paid. The company has been growing at a rate of $5 \%$. This growth should be maintained in the foreseeable future.

The $12 \%$ debentures have a market value of $N \$ 80$. The $10 \%$ debentures are to be redeemed in eight years' time at N\$95 per \$100 nominal. The company has a current market required return of $16.67 \%$ before tax.

The $14 \%$ loan is not traded on the open market, but its effective pre-tax cost has been estimated at $18 \%$. It is redeemable at par in three years' time.
The company tax rate for Palma Ltd is $40 \%$

## Required:

a) Calculate the after tax Weighted average cost of capital (WACC) of Palma Ltd. (NB. The weighting should be based on market values).
b) Discuss what is meant by a "target WACC" and how can company use this concept to finance an investment project.

## QUESTION 3

Areva Resources Namibia Ltd. is undertaking a project involving the construction of a seawater desalination plant at Wlotzkasbaken near Swakopmund. The directors of Areva believe their multimillion dollar project shall be able to supply all the water to be consumed at Trikkopje mine, some 40 km into the dessert. This project shall be financed using funds raised in the Namibian market. The cash flow from the selling of uranium concentrate begins weeks from the commencement of the project and such cash flow shall be invested short term in order to be ploughed back into the project when needed. The company's return for the first six months is estimated to be $14 \%$. Its equity multiplier is 1.2 and the total assets exceed $\mathrm{N} \$ 50$ Million.

As part of their financial strategy, the directors shall invest $N \$ 200000$ with Old Mutual at the beginning of every quarter. The target is to reach N\$2000 000 in two years' time from the Old Mutual investment. The investment yields annual returns of $8 \%$ compounded quarterly. One of the directors is of the opinion that they should use their connections at Old Mutual to get a fair deal on their investment but in return of some fees payable to their connections while one other director does not really care whatever interest they will be charges arguing that it will not benefit them individually.

## Required:

a) Identify and explain the type of market from which Areva's directors will raise funds for their desalination plant.
b) Advise the management of Areva Resources of any three short term securities which they can buy in Namibia. Explain each of these securities.
c) Do directors act in the interest of the shareholders always? Explain.
d) What other four legitimate goals can the company pursue other than wealth maximization?
e) What is the annual return of Areva Resources Ltd.?
f) Determine the debt to equity ratio and the total debt ratio of the company.
g) Will the company be able to reach their target of N\$2000000 in 2 years? If not, how much more should they deposit quarterly to reach this target?

END OF EXAMINATION QUESTION PAPER

