## חAmIBIA UחIVERSITY

OF SCIEחCE AחD TECHחOLOGY

## FACULTY OF COMMERCE, HUMAN SCIENCES AND EDUCATION

DEPARTMENT OF ACCOUNTING, ECONOMICS AND FINANCE

| QUALIFICATION: BACHELOR OF ECONOMICS HONOURS |  |  |
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| QUALIFICATION CODE: <br> O8BECH | LEVEL: 8 |  |
| COURSE CODE: FEO810S | COURSE NAME: FINANCIAL ECONOMICS |  |
| SESSION: JUNE 2023 | PAPER: THEORY AND CALCULATIONS |  |
| DURATION: 3 HOURS | MARKS: 100 |  |
| FIRST OPPORTUNITY EXAMINATION QUESTION PAPER |  |  |
| EXAMINER | Dr. G. Kavari |  |
| MODERATOR: | Dr. R. Kamati |  |
| 1. <br> 2. Answer ALL the questions in blue or black ink. STRICTLY NO PENCIL <br> Sork question on a new page, number the answers correctly and show all your <br> worksumptions. <br> 3. Write clearly and neatly. Round off only final answers to two (2) decimal places <br> 4. Questions relating to this examination may be raised in the initial 30 minutes after <br> the start of the paper. Thereafter, candidates must use their initiative to deal with <br> any perceived error or ambiguities and any assumptions made by the candidate should <br> be clearly stated. |  |  |

## PERMISSIBLE MATERIALS

1. Silent, non-programmable calculators

THIS QUESTION PAPER CONSISTS OF _5_ PAGES (Including this front page)

## QUESTION 1

Suppose the Bank of Namibia has issued $\mathbf{N} \$ 15$ million in the Namibian bond market in order to raise sufficient funds from potential investors. Study the following bond market information available to all potential investors.

The bond issued XYZ , with a nominal value of $\mathrm{N} \$ 15$ million and carrying a $25 \%$ p.a. coupon which matures on 30 June 2024 and with coupon dates 30 June and 31 December, is traded (and settled) on 15 July 2022 at a yield of $14.5 \%$. Register closes one month before interest dates. Bond trades cum interest - there are 169 days left before the next coupon date.

| REQUIRED: | MARKS |
| :---: | :---: |
| i) Determine the number of full six-month coupon payments due before and at maturity. | 2 |
| ii) Determine the number of days from last interest date to next interest date. | 2 |
| iii) Determine the number of days from settlement date to next interest date. | 2 |
| iv) Determine the number of days between last interest date and settlement date (= accrued days for a cum interest bond). | 2 |
| v) Write down the relevant formula applicable for cum interes $\dagger$ bond. | 2 |
| Using above information about trading conditions in the bond market, calculate the following. |  |
| vi) All-in price (AIP) | 5 |
| vii) Accrued interest (AI) | 3 |


| viii) Clean price (CP) | 2 |
| :--- | :---: |
| ix) All-in consideration (AIC) | 5 |

## QUESTION 2

[25 MARKS]

The U.S. financial system is generally considered to be the well-developed, wellregulated in the world, coupled with sophisticated financial products. The U.S Monetary Aggregate is divided into 16 components, categorised into 4 groups, representing M1, M2, M3 and L, respectively.

| REQUIRED: | MARKS |
| :---: | :---: |
| i)List the 16 components of the Monetary Aggregate in the <br> United States. Briefly, examine each component. | 8 |
| ii) $\quad$ What is meant by the financial system? | 4 |
| iii)Appraise the five (5) core functions performed by the <br> financial system. | 5 |
| iv)Mention four (4) money market funds in the Namibian <br> contexts. | 4 |
| v) $\quad$Define monetary aggregate in the Namibian context. | 4 |

Available evidence suggests that financial development including stock market development is correlated with current and future economic growth, capital accumulation, and productivity improvements. The development of the bond and stock markets plays a significant role in the development of all economies.

| REQUIRED: | MARKS |  |
| :---: | :--- | :---: |
| i) $\quad$ Mention three (3) indicators of financial development. | 3 |  |
| ii) $\quad$Specify a simple econometric model to demonstrate the <br> relationship between the dependent variable and <br> independent variables when modelling the relationship <br> between financial development and economic growth. | 5 |  |
| iii)Indicate the expected signs of the coefficients to be <br> estimated in the model specified above. | 5 |  |
| iv) | What is meant by corporate bonds? | 4 |
| v) | Debate the three (3) signs that it's time to sell your bonds. | 6 |
| vi) | Mention any two (2) most popular stock indices for trading <br> around the world. | 2 |

## QUESTION 4

[25 MARKS]

The London Inter-Bank Offered Rate (LIBOR) is an interest rate average calculated from estimates submitted by the leading banks in London. Each bank estimates what it would be charged were it to borrow from other banks. It is the primary benchmark for short-term interest rates around the world.

| REQUIRED: | MARKS |
| :--- | :--- |


| Examine the importance of each of the following Libor related <br> interest rates: |  |  |
| :---: | :---: | :---: |
| i) $\quad$ US Dollar LIBOR interest rate | 2 |  |
| ii) | British pound sterling LIBOR interest rate | 2 |
| iii) | Japanese yen LIBOR interest rate <br> iv) <br> Tokyo Overnight Average Rate (TONAR) | 2 |
| v)If you borrow N\$1000 from a bank for 120 days and the <br> interest rate is 6\%, what is the effective interest rate? | 2 |  |
| vi)Mention the four (4) types of interest rate risk facing <br> Namibian banks. | 4 |  |
| vii)In many countries, treasury bills are sold by single price <br> auctions held weekly. Treasury bills are quoted for purchase <br> and sale in the secondary market on an annualized discount <br> percentage, or basis. <br> State the general calculation for yield on a discount basis <br> for treasury bills. <br> viii)Suppose a client bought a 91-day Certificate of Deposit <br> (CD) with a coupon of 12 per cent, which has 45 days to <br> maturity. The CD has an identical yield of 12 per cent at <br> both purchase and sale. If the CD is sold 25 days later, <br> calculate the holding period return. <br> ix)Describe any four (4) money market instruments prevalent <br> in the Namibian financial system. <br> x)What is meant by structural liquidity risk? <br> xi)What is meant by contingent liquidity risk? | 2 |  |

