ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF LAW, BUSINESS INTELLIGENCE AND ECONOMICS

DEPARTMENT OF ECONOMICS, MARKETING AND ENTREPRENEURSHIP

EXAMINATION PAPER

COURSE CODE	:	CBM 223
COURSE TITLE	:	BUSINESS FINANCE
SPECIAL REQUIREMENTS	:	**Non-programmable calculator**
DURATION	:	3 Hours
LEVEL	:	1.1
DATE	:	31 JUL 2024

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue.
2. Use of silent, non-programmable calculators is allowed.
3. Answer **Any Four (4) questions**.
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets [ ]

QUESTION 1

a) Time value of money states that a dollar today is better than a dollar tomorrow is one of the key concepts of business finance. Identify and explain the reasons why the concept of time value of money is still valid in business finance. **[10 marks]**

b) Peter has invested US$ 12 000 for 3 years in a deposit account that pays annual interest of 12%, compounded quarterly. What is the value of the investment at the end of 3 years? **[3 marks]**

c) What is the today`s value of a 3 year annuity that will make a series of $2 500 payments at the beginning of year for next three years. The prevailing market discount rate is 10%. **[3 marks]**

d) With aid of examples, explain the concepts of annuity and perpetuity. **[9 marks]**

QUESTION 2

a) ZEGU intends on taking a campus expansion project in Harare which costs $20 million. In the first year ZEGU will receive $ 2 million, $ 8 million will be received in the second year, $ 5 million in the third year and 7 million in the fourth year. The cost of capital in the project is 7%. Calculate the net present value of the project. **[8 marks]**

b) A capital project has an average income of $13 500 000 and an average investment of $63 303 000. The expected average accounting return for the project is 21.5%. Calculate the accounting average return for the project and determine if the project should be accepted or rejected. **[5 marks]**

b) Inventory management refers to an optimum investment in inventories and is a critical aspect of business finance planning. With aid of clear examples, discuss the importance of inventory management in an organisation. **[12 marks]**

QUESTION 3

a) A company issued, 1 000 000 equity shares of US$ 80 each. The company has been paying 13% dividend to equity shareholders for the past two years and expected to maintain the same in the future. Compute cost of equity capital. **[6 marks]**

b) Dililo Investment has been paying a dividend of $20. The finance manager recently announced that profitability increased by 20% and the dividends are expected to grow by 7%. However, the market price of the equity shares will remain at $51. Calculate the cost of equity. **[6 marks]**

c) The government of Zimbabwe has issued a Treasury Bill pegged at 4% and is buoyant about the economic prospects. The following three factors have been identified as explaining a stock's return and its sensitivity to each factor and the risk premium associated with each factor have been calculated:

Gross domestic product (GDP): ß = 0.8, Risk premium = 3%

Inflation rate: ß = 1.1, Risk Premium = 6%

Gold prices: ß = 0.9, Risk premium = 14%

Exchange rate: ß = 1.2, Risk premium = 9%

The risk-free rate is 2%

Calculate the cost of equity. **[5 marks]**

d) Discuss the importance of analysing the cost of capital for businesses operating in Zimbabwe. **[8 marks]**

QUESTION 4

a) Agriculture is the backbone of the Zimbabwean economy but the unpredictable weather patterns pose a significant risk to the realisation of normal profits in the sector. An agricultural firm has been given the following information:

Weather	Probability	Income
Severe drought	0.2	$ 12 000

Drought	0.3	$ 75 000
Right weather	0.4	$350 000
Too much rain	0.1	$100 000

Calculate the expected return. **[4 marks]**

b) In a Treasury Bulletin, the government announced that it is going to pay 2.5% for all the Treasury Bills in the market. An asset faces a market return of 6.33% and the measure of risk (β) is 1.2. Calculate the expected return of the asset. **[4 marks]**

c) Given the following the information, calculate the portfolio return. **[5 marks]**

Security	Weight	Expected Return
A	40%	20%
B	50%	15%
C	10%	10%

d) Discuss the core tenets and criticisms of the Capital Asset Pricing Model. **[12 marks]**

QUESTION 5

Study the following information and answer the questions that follow.

Statement of Financial Position for Vahombe Motors (Figures in US$)		
	2021 ($)	2022 ($)
Cash and Short term investments	1019	1134
Accounts receivables	1616	1245
Inventory	2005	3213
Other current assets	1012	981
Total current Assets	**5652**	**6573**
Land	23142	21789
Machinery and plant	19632	17136
Total non-current assets	**42774**	**38925**
Total Assets	**48426**	**45498**

Trade payables	2037	3125
Other current liabilities	1785	671
Total current liabilities	**3822**	**3796**
Long term bond	22145	21586
Total non-current liabilities	**22145**	**21586**
Share capital	1003	999
Retained earnings	21456	19117
Total Equity	**22459**	**20116**
Total equity and liabilities	**48426**	**45498**

a) Calculate the net working capital for 2021 and 2022. **[3 marks]**

b) Calculate current ratios for 2021 and 2022 and comment on the current ratios for the two years. **[3 marks]**

c) Calculate acid/quick test ratios for 2021 and 2022 and comment on the acid/quick test ratios for the two years. **[3 marks]**

d) Calculate equity multiplier ratios for 2021 and 2022 and comment on the equity multiplier ratios for the two years. **[3 marks]**

e) Critically discuss the problems associated with financial information analysis. **[13 marks]**

THE END

FORMULAS

$FV_n = PV * (1 + r)^n$

$FV_n - PV = (1 + r)^n$

$r = \left(\frac{FV}{PV}\right)^{1/n} - 1$

$PV_0 = \frac{FV}{(1+r)^n}$

$PV_0 = \frac{FV}{(1+r)^n}$

$PV\ ann = \frac{C}{r} * (1 - (1 + r)^{-n}$

$PV\ Perp = \frac{C}{r}$

$FV\ ann = \frac{C}{r} * ((1 + r)^n - 1)$

PV ann d $= (1 + \mathrm{r}) *$ PV of annuity

FV ann d$= (1 + \mathrm{r}) *$ FV of annuity

$\mathrm{r} = \frac{\mathrm{QR}}{m}$

$\mathrm{EAR} = 1 + (\frac{QR}{m})^{m} - 1$

$\mathrm{PBP} = \frac{\mathrm{IO}}{CF}$

Payback period $= \mathrm{Y} + \frac{\mathrm{B}}{C}$

$\mathrm{AAR} = \frac{\text{Av Inc}}{Av\ Inv} * 100$

$\mathrm{NPV} = \sum \frac{CF_n}{(1+\mathrm{r})^{\mathrm{n}}} - IO$

$\mathrm{PI} = \frac{\text{PV of CFs}}{IO}$

$\mathrm{IRR} = \mathrm{A} + \mathrm{B} * \frac{\mathrm{C}}{D}$

$K_e = \frac{D}{MP}$

$K_e = \frac{D}{MP} + g$

$K_p = \frac{D}{NP}$

NP = Issue Price – Floatation price

$K_e = \frac{EPS}{MP_e}$

$K_e = R_f + (R_m - R_f) * \beta$

$K_e = R_f + \beta_1 * RP_1 + \cdots + \beta_n * RP_n + \mu$

$K_d = \frac{1}{NP} * (1 - t)$

NP $=$ Amnt of D $-$ D Acq fees $+$ Prem $-$ Disc

$K_r = K_e * (1 - \mathrm{t}) * (1 - b)$

$K_o = \sum W_i K_i$

E (r) $= \sum(Prob * Return)$

$\delta^2 = \sum Prob * (R - E(r))$

$\mathrm{CV} = \frac{\delta}{x}$

$\mathrm{CV} = \frac{1}{n} * \sum(R_x - E(R_x)(R_y - E(R_y)$

$\mathrm{CV} = \sum P_i(R_x - E(R_x)(R_y - E(R_y)$

$r_{xy} = \frac{Covariance_{xy}}{\delta_x \delta_y}$

$\delta_{AB}^2 = W_A^2 \delta_A^2 + W_B^2 \delta_B^2 + 2W_A W_B Cov_{AB}$

$\mathrm{CML}(R_p) = R_f + \frac{E(R_m - R_f)}{\delta_m} * \delta_p$

$\delta_p = \delta_m * W_m$

$E(R_i) = R_f + \beta(R_m - R_f)$

RP$=$ (Rm – Rf)

$TA = TL + E$

$NCA + CA = NCL + CL + E$

$NWC = CA - CL$

$Total\ CF = CF\ from\ operating\ activities + CF\ from\ investing\ activities + CF\ from\ financing\ activities$

Current ratio$= \frac{CA}{CR}$

Acid/quick test ratio$= \frac{CA-Inv}{CL}$

Cash ratio$= \frac{CA+CE}{CL}$

Total debt ratio$= \frac{TA-TE}{TA}$

Debt- equity ratio= $\frac{TD}{TE}$

Equity multiplier= $\frac{TA}{TE}$

Interest cover ratio = $\frac{EBIT}{Int}$

Inventory turnover = $\frac{COGS}{Inv}$

Days` sales in inventory = $\frac{365\ days}{Inv\ T/O}$

Receivables turnover = $\frac{S}{TR}$

Receivables turnover = $\frac{S}{TA}$

Profit margin = $\frac{NI}{S}$

ROA = $\frac{NI}{TA}$

ROE = $\frac{NI}{TE}$

EPS = $\frac{E}{Ordinary\ shares\ in\ issue}$

P/E ratio = $\frac{price\ per\ share}{EPS}$

BEP = $\frac{FC}{Cont}$

Cont = SP – VC

5 pm