ZIMBABWE EZEKIEL GUTI UNIVERSITY

FACULTY OF LAW, BUSINESS INTELLIGENCE AND ECONOMICS

DEPARTMENT OF ECONOMICS, MARKETING AND ENTREPRENEURSHIP

EXAMINATION PAPER

MODULE CODE	:	CBM223
MODULE TITLE	:	Business Finance
DURATION	:	3 Hours
LEVEL	:	**2.2**
DATE	:	09 JUN 2025

INSTRUCTIONS TO CANDIDATES:

1. No cell phones are allowed in the examination venue.
2. Use of silent, non-programmable calculators is allowed
3. Answer all questions
4. Begin each question on a new page.
5. The number of marks for each question or part question is shown in brackets [ ]
6. Show all workings, where applicable.

SECTION A: ANSWER ALL QUESTIONS [25 MARKS]

Read the case study below and answer the questions that follow.

ZEGU has two projects that it is considering, but can only invest in one project. A local bank has considered ZEGU to be a low risk client and attached a discount rate of 3.3% to their profile. The cashflows are given below:

Project A	**Project B**
Initial investment: $31.3 million	Initial investment: $24.3 million
Cash Flow Year 1: $9 million	Cash Flow Year 1: $4 million
Cash Flow Year 2: $12 million	Cash Flow Year 2: $10 million
Cash Flow Year 3: $4 million	Cash Flow Year 3: $12 million
Cash Flow Year 4: $8 million	Cash Flow Year 4: $6 million
Cash Flow Year 5: $5 million	Cash Flow Year 5: $5 million

However, Tapiwa, the project manager at ZEGU is not sure whether to use the payback period, profitability index or net present value in the evaluation of the two projects. Each method has its own drawbacks and strengths.

Required:

a) Evaluate the strengths and weaknesses of net present value and payback method in the analysis of capital projects

[9 marks]

b) Determine the payback period of each project and appraise on the best project to be undertaken.

[5 marks]

c) Calculate the net present value of each project and appraise the project manager on the best project for ZEGU.

[5 marks]

c) Calculate the profitability index of each project and appraise the project manager on the best project for ZEGU.

[6 marks]

SECTION B: ANSWER ALL QUESTIONS [75 MARKS]

QUESTION 1

a) Critique the use of the matching and recognition principles as used in the preparation of financial statements. **[13 marks]**

b) Evaluate key questions to be asked by finance managers in order to have comprehensive analysis of financial statements. **[12 marks]**

QUESTION 2

a) Gift Engineering targets Sesiway Engineering which has 1 030 111 shares outstanding which are currently trading at $1,25 in the market. Calculate the value of Sesiway Engineering.

[4 marks]

b) ZEGU wants to takeover ZAOGA Christian College which has total assets of $3 543 895 and total liabilities of $2 547 987. Determine the market value ZAOGA Christian College.

[4 marks]

c) Analyse the following information about a portfolio.

Security	Weight	Expected Return
A	57%	9.2%
B	19%	7.3%
C	24%	11.9%

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

d) The return that is derived from investing in a market asset is 17.64% whilst the government pegged the risk-free rate at 4.36%. The variance for the market is 25%. ZEGU wants to invest 73.2% of their proceeds in the market asset and the remainder in risk-free assets. Determine the required rate of return on the portfolio. **[4 marks]**

e) Justify the use of capital asset pricing model in evaluating portfolio return. **[9 marks]**

QUESTION 3

a) Evaluate the reasons that make time value of money a relevant concept in modern corporate finance. **[13 marks]**

b) Calculate the future value (FV) of a $632 879 investment after 3 years given an interest of 9.38% per year. **[3 marks]**

c) Calculate the present value of the $9 450 638 investment receivable in 5 years at 6.21% interest made by Madhubhe Enterprises. **[3 marks]**

d) With aid of examples, distinguish between risk and uncertainty as used in capital risk analysis. **[6 marks]**

FORMULAS

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

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

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

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

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

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

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

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

$PV\ annuity\ due = (1 + r) * PV\ of\ annuity$

$FV\ ann\ due = (1 + r) * FV\ of\ annuity$

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

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

$PBP = \frac{\text{Original cost of the project (intial outlay) (IO)}}{Annual\ cash\ inflow\ (CF)}$

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

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

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

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

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

$ENCF = \sum CF_i * P_i$

$ENPV = (\sum \frac{ENCF}{(1+r)^n}) - IO$

$Variance\ (\delta^2) = \sum (CF - ENCF)^2 * P_i$

$Standard\ deviation\ (\delta) = \sqrt{\delta^2}$

$Coef\ of\ var = \frac{Standard\ deviation}{Expected\ return/Expected\ cashflow}$

$RADR = R_f + R_p$

$NPV = \sum (\frac{\alpha_n * CF_n}{(i+r_f)^n}) - IO$

$WACC/\ K_o = \sum W_i K_i$

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

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

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

NP = Issue Price – Flotation price

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

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

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

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

NP = Amnt of D − D Acq fees + Prem − Disc

$K_r = K_e * (1 - t) * (1 - b)$

maximum level = reorder level − (minimum consumption) * (minimum lead times) + reordering quantity
minimum level = reorder level − (average usage * average lead time)
Reorder level = maximum usage * maximum lead time or minimum level + consumption during lead time.

$E(R_i) = R_f + \beta_1 (R_{m1} - R_f) + \cdots \ldots + \beta_n (R_{mn} - R_f)$

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

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

Standard deviation $\delta = \sqrt{\delta^2}$

$Er\ (p) = \sum W_i * E(r)_i$

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

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

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

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

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

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

$\delta_p = \delta_m * W_m$

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

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

Dividends per share = $\frac{Dividends\ announced\ during\ the\ period}{Number\ of\ shares\ in\ issue}$

Value of target firm = Market thare price * number of outstanding shares
Value of target firm = Total assets – total liabilities

END OF EXAMINATION PAPER.

20/12 AM