



ZIMBABWE EZEKIEL GUTI UNIVERSITY
FACULTY OF BUSINESS, ECONOMICS AND ACCOUNTING
DEPARTMENT OF ACCOUNTING AND FINANCE

EXAMINATION PAPER

COURSE CODE : **CAC406**

COURSE TITLE : **INVESTMENT ANALYSIS AND PORTFOLIO
MANAGEMENT**

SPECIAL REQUIREMENTS : **STATISTICAL TABLES**

DURATION : **3 Hours**

LEVEL : **4.1**

DATE :

01 JUL 2022

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 in Both Section A and Section B.
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.
7. Formulae sheet to be provided.

SECTION A

Answer all questions in this Section. Each question carries 2marks

Select the most appropriate answer.

1. Employment of funds with the aim of achieving additional income is known as ____
 - A) Investment
 - B) Speculation
 - C) Gambling
 - D) Biting
2. _____ is based on tips, rumours and hunches, unplanned and without knowledge of the exact nature of risk.
 - A) Investment
 - B) Speculation
 - C) Gambling
 - D) Arbitrage
3. Rising of prices and falling of standard of living is arises at the time of ____
 - A) Inflation
 - B) Boom period
 - C) Normal period
 - D) Deflation
4. _____ risks cover the risk of market, interest rate risk and purchasing power risk.
 - A) Systematic
 - B) Unsystematic risk
 - C) Financial
 - D) Business
5. Risk due to internal environment of a firm or those affecting particular industry are referred to as ____
 - A) Unsystematic risk
 - B) Systematic risk
 - C) Normal risk
 - D) Abnormal risk
6. Variance calculation and measuring the Standard deviation is one way of measuring the ____
 - A) Risk

- B) Return
- C) Speculation
- D) Gambling

7. The fundamental analysis approach has been associated with _____.

- A) Uncertainties
- B) Certainties
- C) Ratios
- D) Balance sheet

8. Technical analysis is useful _____.

- A) To make an estimate of growth in a stock market
- B) To find out the market forces influencing stock market
- C) To indicate the direction of the overall market
- D) To analyze the economic activity of government.

9. Markowitz model presumed generally investors are

- A) Risk averse
- B) Risk natural
- C) Risk seekers
- D) Risk moderate

10. A combination of various investment products like bonds, shares, securities, mutual funds and so on is called as _____.

- A) Portfolio
- B) Investment
- C) Speculation
- D) Gambling

[Total 20marks]

SECTION B

Answer ALL questions in this Section

Question One

- a). Compare and contrast Investment and Speculation. [25 marks]
- b). Briefly explain any four factors that determine option values. [5 marks]

[Total

30marks]

Question Two

- a). Portfolio management process has got some steps that should be followed by investors. Using practical examples, explain the steps involved. [16 marks]
- b). Explain any three investment constraints that investors face. [9marks]

[Total

25marks]

Question Three

- a). Explain the factors that affect Bond Yields. [15 marks]
- b). Calculate the duration in years of a 4 year 8% bond with a par value of \$1 000 and a YTM of 10%? [10 marks]

[Total 25marks]

END OF EXAMINATION QUESTION PAPER

**FORMULA SHEET FOR CAC 406 INVESTMENT ANALYSIS AND PORTFOLIO
MANAGEMENT**

1. Bond Price = $\sum(C_n / (1+YTM)^n) + P / (1+i)^n$

Where n = Period which takes values from 0 to the nth period till the cash flows ending period,

C_n = Coupon payment in the nth period,

YTM = interest rate or required yield and

P = Par Value of the bond

2. CAPM Required return, $R_i = R_f + \beta (R_m - R_f)$.

Where R_i -required return of stock i,

R_f - Risk free rate,

R_m -Market return rate and

β - Beta coefficient of the market

3. Beta coefficient of stock A, $\beta = \text{Cov}(r_a, r_m) / \sigma^2_m$,

Where r_a = stock A return,

R_m = Market return and

σ^2_m = Market variance

4. Correlation coefficient for Assets A and B., $R = \text{Cov}(A, B) / \sigma_a \sigma_b$

Where σ_a = Standard deviation of stock A and

σ_b = Standard deviation of Stock B.

5. Covariance for stock A and B, $\text{Cov}(a,b) = \sum p_i (r_a - E(r_a))(r_b - E(r_b))$

$$\text{or } \sum (r_x - \bar{X})(r_y - \bar{Y}) / (n - 1)$$

6. Expected return of stock X, $E(r) = \sum p_x$ or $\sum x/n$

where p = probability of economic state,

x = return of each economic state and

n = number of items.

7. Sharpe's ratio = $(R_p - R_f) / \sigma_p$

where σ_p = standard deviation of the portfolio,

R_p = return on portfolio and

R_f = risk free rate.

8. Treynor's ratio = $(R_p - R_f) / \beta_p$ where β_p = beta of portfolio.

9. Jensen's alpha = $R_i - ((R_f + \beta_p (R_m - R_f)))$

10. Duration = $\sum (t \times PV) / \sum PV$

where t = time and

PV is the present value of the cashflows.

11. Variance of stock A, $\sigma_A^2 = \sum p_i (r_a - E(r_a))^2$

12. Portfolio variance, $\sigma_{ab}^2 = w_a^2 \sigma_a^2 + w_b^2 \sigma_b^2 + 2w_a w_b \text{COV}_{ab}$

or

$$w_a^2 \sigma_a^2 + w_b^2 \sigma_b^2 + 2w_a w_b \sigma_a \sigma_b r_{ab}$$