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**KIRIRI WOMENS' UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2015/2016 ACADEMIC YEAR**  
**THIRD YEAR, SECOND SEMESTER EXAMINATION**  
**FOR THE DEGREE OF BACHELOR OF SCIENCE**  
**(BUSINESS ADMINISTRATION)**

Date: August, 2016  
Time:

**KFI 302 – INVESTMENT ANALYSIS 1**

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

- a) KenGen opened its 2016 rights issue on 23<sup>rd</sup> May 2016 and closed on 10<sup>th</sup> June 2016, as an investment analysis student outline five items that must have appeared in the abridged information memorandum and outline five advantages of this rights issue to the shareholders.  
(10 Marks)
- b) State and explain two theories used to explain when to time investment in the stock exchange.  
(6 Marks)
- c) The Moon Company Ltd. has issued 10,000,000, Sh. 10 par equity shares which are at present selling for Sh. 30 per share. It has also issued 5,000,000 warrants, each entitling the holder to buy one equity share. The warrants are protected against dilution.

The company has plans to issue rights to purchase one new equity share at a price of Sh. 20 per share for every four shares held.

**Required:**

- i) Calculate the theoretical ex-rights price of Moon Company Ltd's equity shares.  
(1 Mark)
- ii) The theoretical value of a right of the Moon Company Ltd. before the shares sells ex-rights.  
(2 Marks)

The chairman of the company receives a phone call from an angry shareholder who owns 100,000 shares. The shareholder argues that he will suffer a loss in his personal wealth due to this rights issue, because the new shares are being offered at a price lower than the current market value.

The chairman assures him that his wealth will not be reduced because of the rights issue, as long as the shareholder takes appropriate action.

**Required:**

- i) Explain whether the chairman is correct. What should the shareholder do?  
(2 Marks)
- ii) A statement showing the effect of the rights issue on this particular shareholder's wealth, assuming;
- He sells all the rights.
  - He exercises one half of the rights and sells the other half.
  - He does nothing at all. (6 Marks)
- iii) Are there any real circumstances which might lend support to the shareholder's claim?  
(3 Marks)

**QUESTION TWO (20 MARKS)**

A company currently has Shs 20,000,000, 12% debenture issue outstanding which has 20 years remaining to maturity. The company can now sell a Shs 20 million 20 year bond or debenture with a normal or coupon rate of 20% that will net Shs 19.6 million, after the underwriting expenses of the old bond. The core premium and the unamortized discount of the old bond are deductible as expenses in the year of refunding. The old issue has Shs 200 000 unamortized discounts outstanding and unamortized legal fee of Shs 100 000. The core right of old bond is Shs 109 and the issuing expenses on the new bond are Shs 150, 000 and there is a 30 day period of interest overlap. Assume that the effective income tax is 50%.

**Required:**

- i) Advise the company on whether to replace the old issue with the new bonds.  
(15 Marks)
- ii) What assumptions must be made in deriving the Capital Asset Pricing Model (CAPM)?  
(5 Marks)

**QUESTION THREE (20 MARKS)**

- a) Identify and briefly explain the factors that must be taken into account in the design and construction of a market index for shares.  
(5 Marks)
- b) Explain uses of security market indices.  
(8 Marks)
- c) Empirical tests of the efficient market theory have uncovered a number of results suggesting anomalies may exist to this theory. Briefly discuss such anomalies.  
(7 Marks)

**QUESTION FOUR (20 MARKS)**

- a) What are the differences between an "operating lease" and a "finance lease"?  
(6 Marks)

- b) Githurai Ltd is evaluating the acquisition of a heavy duty forklift. The company can either purchase the equipment through the use of its normal financing mix (30% debt and 70% equity) or lease it.

The following additional information is available:

1.	Acquisition price	Sh.8, 000,000
2.	Useful life	4 years
3.	Salvage value	Sh.1, 600,000

Depreciation method – straight line

Annual (before tax and depreciation) cash savings Sh.2, 400,000

Rate of interest on a four year period 10%

Marginal tax rate 10%

Annual lease rentals Sh.2, 400,000

Annual operating expenses Sh. 400,000

Cost of capital 12%

Required:

- i) Evaluate whether acquisition of the forklift through purchase is justified. (4 Marks)
- ii) Should Githurai Ltd. lease the asset? (10 Marks)

#### **QUESTION FIVE (20 MARKS)**

- a) Security returns depend on only three risk factors-inflation, industrial production and the aggregate degree of risk aversion. The risk free rate is 8%, the required rate of return on a portfolio with unit sensitivity to inflation and zero-sensitivity to other factors is 13.0%, the required rate of return on a portfolio with unit sensitivity to industrial production and zero sensitivity to inflation and other factors is 10% and the required return on a portfolio with unit sensitivity to the degree of risk aversion and zero sensitivity to other factors is 6%. Security i has betas of 0.9 with the inflation portfolio, 1.2 with the industrial production and -0.7 with risk bearing portfolio (risk aversion). Assume also that required rate of return on the market is 15% and stock i has CAPM beta of 1.1

Required:

Compute security i's required rate of return using

- i) CAPM (2 Marks)
- ii) APT (3 Marks)
- b) A company negotiates a Shs 30 million term loan for eight years from a financial institution. The interest rate is 14% per annum on the outstanding balance of the loan. The principal and interest will be repaid in eight equal year-end instalments.

Required;

Prepare a loan repayment schedule.

(8 Marks)

- c) Define the term investment as used in finance and explain major types of investments. (7 Marks)