UNIVERSITY OF COLOMBO, SRI LANKA

FACUTY OF MANAGEMENT AND FINANCE

Bachelor of Business Administration (Level II – Semester VI)

Repeat Examination – December, 2017

MOS 2303 – Investment Analysis and Portfolio Management

Three (03) Hours

- **Answer all questions.**
- **Use of calculator is permitted.**

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1. The stocks of Woodstock Solutions PLC performs well during recessionary periods while the stocks of Royal Tours PLC performs well during growth periods. The expected rate of returns of these two stocks for the next year are estimated as follows.

Economic Condition	Probability	Return on Woodstock	Return on Royal
Growth	0.60	12%	40%
Stagnation	0.25	20%	15%
Recession	0.15	30%	-10%

i. Calculate the expected rate of return and standard deviation for each stock separately.

(10 marks)

ii. Calculate the coefficient of variation for each stock.

(03 marks)

iii. As a rational investor, which company would you select for your investment? Mention the reason for selection.

(02 marks)

iv. Calculate the covariance and the correlation coefficient of the two stocks and interpret the results.

(10 marks)

(Total marks 25)

2. An investor holds equity shares of Olympus PLC and Mechanic PLC in equal proportions. The expected returns of the two stocks are 24% and 19% respectively. Also the standard deviations of the two stocks are 28% and 23% respectively. The two stocks have a positive correlation of 0.6. The risk free rate of return in the market is 12% and the return on market portfolio is 23%. The beta of Olympus PLC is 1.2 and the beta of Mechanic PLC is 0.6.

   i. Calculate the expected rate of return and standard deviation for the portfolio.

   (06 marks)

   ii. The investor wants to reduce the portfolio risk to 15%. While other things remain constant what would be the correlation coefficient required to reach this desired risk level of the investor.

   (06 marks)

   iii. Using CAPM approach, determine whether these two stocks are correctly priced or not. Justify your answers.

   (06 marks)

   iv. The investor decides to invest 20% on risk-free securities and to split the remainder equally on these two risky stocks. Calculate the expected return and the standard deviation of this new portfolio.

   (07 marks)

(Total marks 25)

3. Mr. Dabare purchases 1,000 shares of Griffin Holdings PLC on margin for Rs.100. The initial margin requirement is 50% and the maintenance margin requirement is 25%. The interest rate charge by the Brokers on an overdraft facility is 10%. Griffin Holdings PLC pays a dividend of 20% on the nominal value of the share which is Rs.10.

   i. Prepare the balance sheet of the margin purchaser after the margin purchase.

   (05 marks)

ii. Determine the conditions after marking to market in the following scenarios along with the changes in the balance sheet of the margin purchaser if the possible actions were executed.

a. If the price declines to Rs.60.

b. If the price declines to Rs.80.

c. If the price increases to Rs.120.

(12 marks)

iii. Calculate the holding period return of the cash purchaser and the margin purchaser separately for the following scenarios

a. If the price increases to Rs.150 at the end of the period

b. If the price declines to Rs.50 at the end of the period

(08 marks)

(Total marks 25)

4. Write short notes on the following.

i. Investment Process

ii. Colombo Stock Exchange

iii. Types of Orders

iv. Indifference Curves

v. Efficient Set Theorem

(Total marks 25)
