



UNIVERSITY OF RUHUNA
FACULTY OF GRADUATE STUDIES
Master of Business Administration Degree Programme
Part II - First Semester End Examination – January 2020
Academic Year 2019/2020

MBA 201: Financial Management

Total Marks: 60

Duration: Three hours

- The question paper contains five (5) questions.
- Answer all questions.
- Scientific calculators are allowed.

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- (1) (i) Briefly explain at least two reasons for money to have a time value. (2 Marks)
- (ii) An annuity due can be considered as a special type of cash flow. Explain the key characteristics of an annuity due using a suitable example. (2 Marks)
- (iii) Suppose that you are to receive Rs. 5,000,000 exactly after 30 years from now. What is the present value of this cash flow if the applicable discount rate is 10%? (2 Marks)
- (iv) A bank charges a monthly interest rate of 3% on the outstanding balance of a credit card if it is not settled by the due date. Calculate the (a) annual percentage rate and (b) the effective annual rate of interest for this credit card. (2 Marks)
- (v) You obtain Rs. 2 million as a bank loan to be repaid in 10 years. What is the monthly installment applicable to this loan if the annual interest rate is 12%? (2 Marks)
- (vi) A company is planning to redeem its preference shares after 5 years. The total financing required for this shall be Rs. 2.5 million. The company is planning to establish a sinking fund to finance this redemption. How much should the company invest in the sinking fund annually (investment is made at the end of the year) if the applicable interest rate is 12% p.a.? (2 Marks)

(Total 12 Marks)

- (2) The 'Sealand' company is considering a new investment project which has five years life time. The initial cost of this investment is Rs. 4,500,000 and it requires Rs. 400,000 working capital at the beginning of the investment. The cash flows during the life time of the investment are as follows.

	Year 1 Rs. '000	Year 2 Rs. '000	Year 3 Rs. '000	Year 4 Rs. '000	Year 5 Rs. '000
Sales	3710	5194	5640	6084	5640
Materials	578	810	972	1134	972
Labour	1155	1620	1944	2268	1944
Overhead Cost	53	106	108	105	106
Interest	580	580	580	580	580

You are given the following additional information regarding this investment.

- Depreciation at 25% per year should be provided on reducing balance method.
- Tax rate on the profit of this investment is 30%.
- Salvage value of this investment project is Rs. 1,500,000 at the end of its life time.
- Weighted average cost of capital is 15%.

You are required to,

- (i) Calculate the Net Present Value, Internal Rate of Return, and Accounting Rate of Return of this investment project. (8 Marks)

- (ii) Give your comments and recommendations to the top management of Sealand Company on this investment according to the calculations you have made in above (i). (4 Marks)

(Total 12 Marks)

- (3) (i) Tobacco company has the following long-term capital outstanding as at 31st March 2019.

- 50,000 ordinary shares of Rs. 10 par value. The share is currently selling at Rs. 50 per share. The dividends per share for the past several years are as follow:

Year	Dividends (Rs.)
2012	1.80
2013	2.00
2014	2.10
2015	2.32
2016	2.60
2017	3.00
2018	3.18
2019	3.64

- 10 per cent debentures of Rs. 600,000 with a face value per debenture is Rs. 1000. The debentures were issued in 2013 and are due on 31st March 2020. The current market price of a debenture is Rs. 940.

- Preference shares with a face value of Rs. 400,000. The annual dividend is Rs. 8 per share. The preference shares are currently selling at Rs. 80 per share.

You are required to compute the firm's weighted average cost of capital, assuming a corporate tax rate of 40 per cent. (6 Marks)

- (ii) Jumbo limited has current earnings per share of Rs. 10.40, which has been growing at 10 per cent. The growth rate is expected to continue in the future. Jumbo limited has a policy of paying 50 per cent of its earnings as dividends. If the company's capitalization rate is 16 per cent,

- (a) Calculate the value of a share? (3 Marks)
 (b) Calculate the value of growth opportunities? (3 Marks)

(Total 12 Marks)

- (4) (i) Explain the terms risk and return using an example. (2 Marks)

- (ii) Assume you have bought a share for Rs. 175 a year ago of which the nominal value is Rs. 100. The share is currently selling in the market at Rs. 195. At the end of the year, the company has paid Rs. 30 per share as dividend. What is the total return from this investment? (2 Marks)

- (iii) The current price of a share is Rs. 75. Forecasted prices and dividends for this share under different economic conditions predicted for the next year are given in the below table.

Economic Condition	Probability	Share Price (Rs.)	Dividend (Rs.)
Optimistic	0.4	100	5
Neutral	0.3	85	3
Pessimistic	0.3	70	2

- (a) Calculate the expected return on this share for the next year. (2 Marks)
 (b) Calculate the risk of this investment. (3 Marks)
 (c) Estimate the probability of making a loss, if we invest in this share. (3 Marks)

(Total 12 Marks)

- (5) Assume that the expected return on market portfolio is 20% and the risk-free rate is 3.4%. The standard deviation of the returns on shares of X is 7.4% whereas the standard deviation of the returns on shares of Y is 18%. Asset betas for shares of X and shares of Y are 0.52 and 1.90 respectively. The covariance between the returns of two shares is -100.

$$\sigma_p^2 = \sigma_x^2 w_x^2 + \sigma_y^2 w_y^2 + 2w_x w_y \sigma_x \sigma_y \text{Cor}_{xy}$$

- (i) Calculate the correlation coefficient between the returns of the two shares. (2 Marks)

- (ii) Calculate the return, if an investor has invested 25% of his wealth in the risk-free asset and the balance in the market portfolio. (2 Marks)
- (iii) Calculate the expected returns of the shares of two companies separately based on Capital Assets Pricing Model. (2 Marks)
- (iv) If an investor plans to invest 30% of his wealth in the shares of X and the balance in Y shares,
 - (c) Calculate the portfolio return and, (3 Marks)
 - (d) Calculate the portfolio risk. (3 Marks)

(Total 12 Marks)
