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**University Examinations 2015/2016**

THIRD YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF COMMERCE.

**BFC 3381: PROJECT APPRAISAL**

**DATE: AUGUST 2016 TIME: 2 HOURS**

**INSTRUCTIONS: -** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Abba investments wants to invest in securities A and B of firms in two different industries. The following information relates to the two securities.

 A B

Expected return 14% 12%

Standard deviation 5 3

Beta 1.70 1.20

Amount of money invested shs 720,000 shs. 480,000

**Required:**

1. Calculate the expected portfolio return. (5 marks)
2. Calculate the beta of the portfolio. (5 marks)
3. Explain what happens to the portfolio risk if the returns of the two securities are:
4. Perfectly positively correlated
5. Perfectly negatively correlated (5 marks)
6. Discuss the benefits of cost of capital knowledge in the management of an organization. (5 marks)
7. Consider the following income statement of Watetu Ltd

Watetu LIMITED

PROFIT AND LOSS STATEMENT FOR YEAR ENDED 31.12.19..

 A B C Total

 £’000 £’000 £’000 £’000

Direct materials 110 100 150 360

Direct labour 50 40 80 170

Variable overhead 65 60 100 225

Fixed overhead 45 120 220 385

TOTAL COSTS 270 320 550 1,140

Profit/(loss) 45 65 (50) 60

SALES VALUE 315 385 500 1,200

The management decides to discontinue product C which is reporting a loss of sh. 50,000. If fixed costs do not change, what would be your recommendation? (10 marks)

**QUESTION TWO (20 MARKS)**

1. Explain the concept of “rate of interest” in context of financial decisions. (5 marks)
2. Centenary Company has been dumping in the local council waste collection centre some 30,000 kg of unusable chemicals each year. In addition to being an eyesore, the residents of a nearby estate have started complaining of bad odour emanating from the dump and suspect that the company is to blame.

The company has received information that these chemicals can be recycled at relatively little cost. The equipment to do it is however rather expensive and, in addition, the chemicals recovered are of a relatively poor quality. Investigations have shown that these chemicals can be sold to another firm at an average price of sh. 35 per kg. The direct cost of recycling has been calculated at sh. 15 per kg but this is before depreciation and taxes.

The equipment for this process has an expected life of 10 years and a current cost of sh. 2 million. At the end of the ten year, it will be virtually worthless.

For financial analysis, the company uses the straight line method of depreciation and an average tax rate of 40%. It has a required rate of return of 15%.

**Required:**

1. Compute the project’s net present value (N.P.V) (5 marks)
2. Compute the payback period and the accounting rate of return. (2 marks)
3. Compute the internal rate of return (IRR) (3 marks)
4. Should this project be undertaken? Explain (2 marks)
5. Are there any other important matters that the company should consider in evaluating this project? (3 marks)

**QUESTION THREE (20 MARKS)**

1. Wangatho Ltd manufactures a product that uses components made by the company. Due to market liberalization, the same component can be bought from an importer of the component. The management accountant of Wangatho Ltd has provided the following manufacturing data for the component:

 Shs.

Direct material

 10 kg zero 1 @ sh 25 per kg 250

Direct labour

 Department 1 0.75 hours x sh 120

 2 0.6 hours x sh 125 165

Variable overheads 80

Production overheads are recovered on basis of 20% of labour cost in both departments. The cost accountant anticipates that three-quarters of fixed overhead will be incurred irrespective of the decision made. The importer is willing to sell the component at sh 510 per unit.

Required:

1. Advise the management of Wangatho Ltd whether to make or buy the component. (7 marks)
2. What other factors would Wangatho Ltd consider before making the decision? (3 marks)
3. The arbitrage Pricing Theory (APT) is much more robust than the capital asset pricing model for several reasons. Discuss five such reasons. (10 marks)

**QUESTION FOUR (20 MARKS)**

1. Explain the meaning of the term “cost of capital” and explain why a company should carefully calculate its cost of capital. (4 marks)
2. Identify and briefly explain three conditions which have to be satisfied before the use of the weighted average cost of capital (WACC) can be justified. (6 marks)
3. Biashara Ltd. has the the following capital structure:

|  |  |
| --- | --- |
|  | **Sh. ‘000’** |
| Long-term debtOrdinary share capitalRetained earnings | 3,6006,5004,000 |

The finance manager of Biashara Ltd. has a proposal for a project requiring sh. 45 million. He has proposed the following method of raising the funds:

* Utilise all the existing retained earnings
* Issue ordinary shares at the current market price
* Issue 100,000 10% preference shares at the current market price of Sh. 100 per share which is the same as the par value.
* Issue 10% debentures at the current market price of Sh. 1,000 per debenture.

**Additional information:**

1. Currently, Biashara Ltd pays a dividend of sh. 5 per share which is expected to grow at the rate of 6% due to increased returns from the intended project. Biashara Ltd’s price/earnings (P/E) ratio and earnings per share (EPS) are 5 and sh. 8 respectively.
2. The ordinary shares would be issued at a floatation cost of 10% based in the market price.
3. The debentures par value is sh. 1,000 per debenture
4. The corporate tax rate is 30%

**Required:**

Biashara Ltd’s weighted average cost of capital (WACC) (10 marks)

**QUESTION FIVE (20 MARKS)**

1. Gakoromone Ltd. wishes to make a choice between two mutually exclusive projects. Each of these projects requires sh. 400,000,000 in initial cash outlay. The details of the two projects are as follows:

**Project A**

This project is made up of two sub-projects. The first sub-project will require an initial outlay of sh. 100,000,000 and will generate sh. 25,600,000 per annum in perpetuity. The second sub-project will require an initial outlay of sh. 300,000,000 and will generate sh. 85,200,000 per annum for the 8 years of its useful life. This sub-project does not have a residual value at the end of the 8 years. Both sub-projects are to commence immediately.

**Project B**

This project will generate sh. 87,000,000 per annum in perpetuity

The company has a cost of capital of 16%

**Required:**

1. Determine the net present value (NPV) of each project. (6 marks)
2. Compute the internal rate of return (IRR) for each project. (6 marks)
3. Advise Magma Ltd on which project to invest in, and justify your choice. (4 marks)
4. Discuss the main function of a financial manager in a profit making entity. (4 marks)