TECHNICAL UNIVERSITY OF MOMBASA

Faculty of Business & Social Studies

DEPARTMENT OF BUSINESS STUDIES

UNIVERSITY EXAMINATIONS FOR
MASTERS IN BUSINESS ADMINISTRATION

BFI 5204: CORPORATE FINANCE

END OF SEMESTER EXAMINATIONS
SERIES: APRIL 2015
TIME: 3 HOURS

INSTRUCTIONS:

- Attempt question **ONE (Compulsory)** and any other **THREE** questions
- Do not write on the question paper.

This paper consists of Four printed pages

QUESTION 1 (Compulsory)

Kiwanda Limited is considering the purchase of a new machine. Two alternative machines Upesi TZO and Upesi MO2, which will cost sh. 6,000,000 and sh. 7,000,000 respectively are available in the market. The cashflow after taxation of each machine are as follows:

Year	Pesi T20	Upesi M02
T	600,000	1,800,000
2	1,800,000	2,400,000
3	2,000,000	3,000,000
4	3,000,000	1,800,000
5	2,400,000	1,600,000

Required:

a) Compute the net present value of each machine. **(10 marks)**

b) Assuming that each machine represents a project:
   i) Compute the return Kiwanda Limited expects to earn from each of the two projects. **(10 marks)**
   ii) Comment on the use of the results obtained in (a) and (b) i) above in selecting between the two projects. **(5 marks)**

QUESTION 2

The following is the capital structure of XYZ Ltd as at 31/12/2014.

	Sh. (million)
Ordinary share capital of sh. 10 per value	400
Retained earnings	200
10% preference share capital sh. 20 per value	100
12% debenture sh. 100 per value	200
	900

Additional information:

1. Corporate tax rate is 30%.
2. Preference shares were issued 10 years ago and are still selling at par value. MPS = Par Value.
3. The debenture has a 10 year maturity period. It is currently selling at sh. 90 in the market.
4. Currently the firm has been paying dividend per share of sh. 5. The DPs is expected to grow at 5% p.a in future. The current MPS is sh. 40.

Required;

a) Determine the WACC of the firm. **(8 marks)**

b) Explain why market values and not book values are used to determine the weights. **(8 marks)**

c) What are the weaknesses associated with WACC when used as the discounting rate, in project appraisal. **(9 marks)**

QUESTION 3

Bluewater PLC, manufactures of speciality chemical, has been reported to the anti-pollution authorities on several occasions in recent years, and fined substantial amounts for making excessive toxic discharge into local rivers. Both the environmental lobby and Bluewaters shareholders demand that it clean up its operations. It is estimated that the total fines it may incur over the next four years can be summarized by the following probability distribution (all figures are expressed in present values).

Level of fine	Probability
£0.5 M	0.3
£0 1.4 M	0.5
£ 2.0 M	0.2

Filta & Strayne Ltd, a firm of environmental consultant has advised that new equipment costing £1M can be installed virtually to eliminate illegal discharges. Unlike fines, expenditure on pollution control equipment is tax –allowable via a 25% writing down allowance (reducing balance). The rate of corporate tax is 30%. Tax is payable quarterly in the seventh and tenth month of the year in which the profit is earned and in the first and fourth months of the following year. The equipment will have no resale value after its expected four-year working life, but can be in full working order prior to Bluewater's next financial year.

A European Union common pollution policy grant of 25% of gross expenditure is available, but with payment delayed by a year. Immediately on receipt of the grant from the EU, Bluewater's will pay 20% of the grant to FSL as commission. These transactions have no tax implication for Bluewater.

A disadvantage of the new equipment is that it will raise production costs by £ 30 per tonne over its operating life. Current production is 10,000 tonnes per annum, but is expected to grow by 5% per annum compound. It can be assumed that other production costs and product price are constant over the next four years. No change in working capital is envisaged.

Bluewater applies a discount rate of 12% after all taxes to investment projects of this nature. All cash inflows and outflows occur at year ends.

Required:

a) Calculate the expected net present value of the investment assuming a four-year operating period. Briefly comment on your results. **(11 marks)**

b) Write a memorandum to Bluewater's management as to desirability of the project, taking into account both financial and non-financial criteria. **(7 marks)**

c) "It's a waste of time using any method of investment appraisal other than payback. Discount methods are too complicated and are based on for too many assumptions".

Comment on the statements indicating whether you think the comment are justified. **(7 marks)**

QUESTION 4

Cedes Limited has the following details of two of the future production plans. Only one of these machines will be purchased and the venture would be taken to be virtually exclusive. The standard model costs sh. 50,000 and the Deluxe cost sh. 88,000 payable immediately. Both machines will require the input of the following:

i) Installation costs of sh. 20,000 for standard and sh. 40,000 for the Deluxe.
ii) A sh. 10,000 working capital through their working lives.

Both machines have no expected scrap value at the end of their expected working lives of 4 years for the standard machine and six years for the Deluxe. The operating pre-tax net cash flows associated with the two machines are:

Year	**1**	**2**	**3**	**4**	**5**	**6**
Standard	28,500	25,800	24,210	23,410	-	-
Deluxe	36,030	30,110	28,380	25,940	38,500	35,100

The deluxe machine has only been introduced in the market and has not been fully tested in the operating conditions, because of the high risk involved to be discount rate for the deluxe machine is believed to be 14% per annum, 2% higher than the rate of the standard machine. The company is proposing the purchase of either machine with a term loan at a fixed rate of interest of 11% per annum, taxation at 30% is payable on operating cash-flows one year in arrears and capital allowance are available at 25% per annum on a reducing balance basis.

Required:

a) Calculate the payback period for both the Standard and the Deluxe machine. **(15 marks)**

b) Discuss the advantage of Y disadvantages of payback period. **(10 marks)**

QUESTION 5

a) What do you understand by capital pricing model? In your discussion highlight on the following:
   - Beta coefficient
   - Security market line
   - Capital market line

b) Discuss the assumption of CAPM. **(7 marks)**

c) Explain the differences between CAPM and APT. **(8 marks)**