**NATIONAL OPEN UNIVERSITY OF NIGERIA**
**14-16 AHMADU BELLO WAY, VICTORIA ISLAND, LAGOS**
**SCHOOL OF MANAGEMENT SCIENCES**
**JANUARY/FEBRUARY 2013 EXAMINATION**

**Course Code: MBF 846 Credit Units: 2**
**Course Title: Risk Management**
**Time Allowed: 2 HOURS**
**Instructions: 1. Attempt question number one (1) and any other two (2).**

**2. Question number 1 is compulsory and carries 30 marks while the other 2 questions carry 20 marks each.**

**3. Present all your points in coherent and orderly manner.**

**1a. Define payback period.**
**Mention only two merit and two demerits of payback period.**
**1b. If N500 is received for five years, what will be its present value (PV) at a 20% discounted rate?**
**1c. List ten (10) functions of insurance.**

**2. Given: discount rate = 10%**
**Life of project = 10years**
**Zero year (at the beginning of the project), bought land for N5million**
**Year 1- Building (Construction of building for the project) = N20million**
**Year 2 – Machines (bought machineries) = N30million**
**Year 3-5 for 3 to 5years, operation and maintenance cost is N3million**
**Year 6-10 for 6 to 10 years, operations and maintenance cost is N5million**
**Year 3 to 6years working capital is N1.5million**
**Year 7 to 10years working capital is N3.2million**
**BENEFITS (PWB)**
**3 to 7years sales of products for N20million**
**8 to 10 years sales of products for N30million**
**$11^{th}$ year salvage is N25million**
**$11^{th}$ year is been used here because it's more practical than using the $10^{th}$ year because even if you want to sell the machines after the $10^{th}$ year, it will enter into the $11^{th}$ year. that is, you will only be able to sell machines after the $10^{th}$ year.**
**Question: 2a. Find out if the project is viable or not. Note that discount rate is the opportunity cost of the money as determined by the central bank of a country where the project takes place. Normally, discount rate and interest rate are the same.**
**2b. Using the NPV method, find the PWC and PWB.**
**Note that: NPV = PWB – PWC**
**Where NPV – Net Present Value**
**PWB – Present Worth of Benefit**
**PWC - Present Worth of Cost**

**3 Differentiate between:**
**(a) Risk and Uncertainty**
**(b) Pure risk and Speculative risk**
**(c) Fundamental risk and particular risk**
**(d) Dynamic risk and static risk**
**(e) Subjective risk and objective risk**

**4. Fashola Ltd is wondering whether to invest N700,000 in manufacturing operations in another ECOWAS country which are assumed at the moment to have a four year life.**
**Sales and cost per annum (in N) would be as follow:**

| | N000 | N000 |
|---|---|---|
| **Sales** | | **950** |
| **Material cost of sales** | **250** | |
| **Labour** | **150** | |
| **Overheads** | **250** | |
| **Head office charge** | **50** | |
| **Interest on loan** | **70** | |
| **Depreciation** | **150** | |
| | | **920** |
| **Annual profit** | | |
| **30** | | |

**The residual value of the investment at the end of year 4 would be N100,000**

- **(a) Labour and overheads represent incremental cash cost items, payable in the year to which they relate.**
- **(b) The head office charge is an apportionment of Fashola Ltd's head office administrative costs.**
- **(c) The interest charge relates to the 10% interest payable on a loan of N700,000 that would be raised to finance the investment.**

**If the investment goes ahead, Fashola Ltd would lose some of its overseas sales to the ECOWAS country in which the subsidiary will operate. The estimated loss of sales is 1,000 units, and the price and cost per unit is as follows:**

| | N | N |
|---|---|---|
| **Sales price** | | |
| **100** | | |
| **Variable costs** | **60** | |
| **Overhead cost** | **20** | |
| | | **80** |
| **Profit** | | |
| **20** | | |

**Included in variable costs is N20 for Material A, which is currently in short supply. Any quantities not used by Fashola Ltd to make the exported product could be used to make 1,000 units pa of another product that earns a contribution of N10 per unit in excess of variable cost. This material is expected to be in short supply for years 1 and 2 only.**
**The required rate of return for the project is 15%**
**Ignore taxation and problem of exchange rate fluctuation.**
**Required: calculate the NPV of the project.**

**5a. NET CASH RETURNS**

| | PROJECT A | PROJECTB |
|---|---|---|
| | N | N |
| **Year1** | **8,000** | |
| **10,000** | | |
| **Year2** | **10,000** | |
| **15,000** | | |
| **Year3** | **12,000** | **10,000** |
| **Year4** | **10,000** | **Nil** |
| **Year5** | **Nil** | **Nil** |

**If the capital outlay for each of the project is N25,000. Calculate the accounting rates of return (ARR) on**
**i project A**

**ii project B**
**5b. Mention and discuss the basic methods of treating risk.**



130207101
8