INSTRUCTIONS:

(i.) There are Four (4) questions on this paper carrying equal marks
(ii.) Answer ALL questions
(iii.) Start each question on a new page
(iv.) Show all relevant workings and assumptions supporting your answers.
(v.) Financial tables, formula and graph papers will be provided.

1ST OPPORTUNITY EXAMINATION

The question paper contains Five (5) pages including the front page
**Question 2: Determination of the Cost of Capital**

(25 marks)

Fern Ltd has a capital structure as follows:

100 000 Ordinary shares of NS1 each  
160 000 7% preference shares of 50 cents each  
N$60 000 Retained profit  
N$40 000 Long-term bank loan @ 10% per annum  
N$70 000 8% Debentures @ N$100 par value

You are assessing the company as a credit analyst and obtain the following current market prices for each of the quoted securities:

Ordinary shares N$2.50 and has a beta of 1.10  
Preference shares N$1.00  
Debentures N$110

The risk-free rate is 7 percent; the return on the market is 13 percent p.a.

You further discover that the existing rate of dividend on ordinary shares is 8% and the expected growth is likely to be 10% in the future. Corporate tax is 30 percent.

**Required**

Using market value weights:

a) Calculate the after-tax weighted average cost of capital using the dividend growth model  
(13 Marks)

b) Calculate the WACC using the CAPM  
(12 Marks)

**Question 3: Decision Case, Cash Flow versus Net Income**

(25 Marks)

Shelia Young started a real estate business at the beginning of January, 2010. After approval by the state for a charter to incorporate the company, she issued 1,000 shares of stock to herself and deposited N$20,000 in a bank account for the business under the name Young Properties. Because business was booming, she spent all of her time during the first month selling properties rather than keeping financial records.

At the end of January, Shelia comes to you with the following plight:

I put N$20,000 in to start this business at the beginning of the month. However, my January 31 bank statement shows a balance of N$17,000. After all of my efforts, it appears as if I'm "in the hole" already! On the other hand, that seems impossible-we sold five prime properties for clients during the month. The total sales value of these properties was N$600,000, and I received a commission of 5% on each sale. Granted, one of the five sellers still owes me an N$8,000 commission, but the other four have been collected in full. Three of the sales, totalling N$400,000, were actually made by my assistants. I pay them 4% of the sales value of a property. Sure, I have a few office expenses for my car, utilities, and a secretary; but that's all about it. How can I have possibly lost N$3,000 this month? Where has my money gone?
You agree to help Shelia figure out how her business performed this month. The bank statement is helpful. The total deposits during the month amount to N$22,000. Shelia explains that this amount represents the commissions on the four sales collected so far. Further, check stubs reveal the following expenditures:

<table>
<thead>
<tr>
<th>Check No.</th>
<th>Payee-Memo at Bottom of Check</th>
<th>Amount (NS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Stevens Office Supply</td>
<td>2,000</td>
</tr>
<tr>
<td>102</td>
<td>Why Walk, Let's Talk Motor CO. - new car</td>
<td>3,000</td>
</tr>
<tr>
<td>103</td>
<td>City of Westbrook-heat and lights</td>
<td>500</td>
</tr>
<tr>
<td>104</td>
<td>Alice Hill - secretary</td>
<td>2,200</td>
</tr>
<tr>
<td>105</td>
<td>Ace Property Management - office rent for month</td>
<td>1,200</td>
</tr>
<tr>
<td>106</td>
<td>Jerry Hayes (sales assistant)</td>
<td>10,000</td>
</tr>
<tr>
<td>107</td>
<td>Joan Harper (sales assistant)</td>
<td>6,000</td>
</tr>
<tr>
<td>108</td>
<td>Den's Fill it up- gas and oil for car</td>
<td>100</td>
</tr>
</tbody>
</table>

According to Shelia, the N$2,000 check to Stevens Office Supply represents the down payment on a word processor and a copier for the office. The remaining balance is N$3,000 that must be paid to Stevens by February 15. Similarly, the N$3,000 check is the down payment on a car for the business. A N$12,000 note was given to the car dealer and is due along with interest in one year.

In order to help Sheila Young understand her business, prepare the following:

1. Prepare an income statement for the month of January for Young Properties (ignore depreciation). (6 marks)
2. Prepare a statement of cash flows for the month of January for Young Properties. (9 marks)
3. Draft a memo to Shelia Young explaining as simply and clearly as possible why she did in fact have a profitable first month in business but experienced a decrease in her Cash account. Support your explanation with any necessary figures. (7 marks)
4. The down payments on the car and the office equipment are reflected on the statement of cash flows. They are assets that will benefit the business for a number of years. Do you think that any of the cost associated with the acquisition of these assets should be recognized in some way on the income statement? Explain your answer. (3 marks)

Question 4: Application of the Present & Future Value of Multiple Cash Flows (25 Marks)

Part 1

An insurance company is offering a new policy to its customers. Typically, the policy is bought by a parent or grandparent for a child at the child's birth. The details of the policy are as follows: The purchaser (say, the parent) makes the following six payments to the insurance company:
First birthday: N$ 800
Second birthday: N$ 800
Third birthday: N$ 900
Fourth birthday: N$ 900
Fifth birthday: N$ 1,000
Sixth birthday: N$ 1,000

After the child's sixth birthday, no more payments are made. When the child reaches age 55, he or she receives N$350 000.

The relevant interest rate is 11 percent for the first six years and 7 percent for all subsequent years.

**Required**

a. Determine the present value of the proposed payments 

b. What is the present value of the proposed insurance lump sum payment? And determine whether the policy is worth buying

**Part II**

You are planning to purchase a motorhome at one of the famous beaches in the country for N$40,000 and you have a savings of N$10,000 to apply as a down payment. You may borrow the remainder under the following terms: a ten-year loan with semi-annual repayments and a stated interest rate of 6 percent. You intend to make N$6,000 payments, applying the excess over your required payment to the reduction of the principal balance.

**Required**

a. Given these terms, how long (in years) will it take you to fully repay your loan?

b. What will be your total interest cost?

c. What would be your interest cost if you made no prepayments and repaid your loan by strictly adhering to the terms of the loan?

*** THE END***