NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF NATURAL RESOURCE AND SPATIAL SCIENCES

DEPARTMENT OF AGRICULTURE & NATURAL RESOURCES SCIENCES

QUALIFICATION : BACHELOR OF NATURAL RESOURCES MANAGEMENT IN NATURE CONSERVATION	
QUALIFICATION CODE: 07BNTC	**LEVEL:** 5
COURSE CODE: FMN520S	**COURSE NAME:** FINANCIAL MANAGEMENT (NATURE CONSERVATION)
DATE: January 2019	**PAPER:** THEORY
DURATION: 3 Hours	**MARKS:** 100

SECOND OPPORTUNITY / SUPPLEMENTARY EXAMINATION QUESTION PAPER	
EXAMINER(S)	M. Lubinda
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INSTRUCTIONS

1. Answer ALL four (4) questions.
2. Read all questions carefully before answering.
3. Number your answers clearly.
4. Make sure your student number appears on the answering script.

PERMISSIBLE MATERIALS

1. Examination paper.
2. Examination script.
3. Calculator

THIS QUESTION PAPER CONSISTS OF 6 PAGES (Including this front page)

QUESTION ONE [MARKS]

a. One of the main drivers of this challenge is lack of financial records or poor financial record keeping among the conservancies. Based on what you have learned in this course:

i. Give three examples of the sources of financial information/data. (3)

ii. State the elements of a good financial record keeping system. (3)

iii. Give two examples of the use of financial information/data. (2)

b. Consider Mark Enterprises, whose total assets value was N$400,000 at the end of 31 December 2017. The accompanying table shows the common-size balance sheet for Mark Enterprises as of 31 December 2017. Use this information to answer the questions below:

Common-size Balance Sheet for Mark Enterprises as of 31 December 2017	%
Cash	5
Accounts Receivable	15
Inventory	30
Net Fixed Assets	50
Total Assets	**100**
Accounts payable	21
Accruals	5
Notes payable	4
Long-term debt	15
Equity	55
Total Liabilities and Equity	**100**

i. Prepare the balance sheet for ABC Ltd as of 31st Dec 2017. (5)

ii. Suppose the transactions listed below were made by between January 2018 and May 2018. On the basis of this information, use the double entry system to prepare the balance sheet of Mark Enterprises as at the end of May 2018. (12)

- ***January***, the company purchased equipment worth N$70,000. When making the purchase the company made a cash down payment of N$10,000, and the remain will be paid in full plus 10% interest before 31 December 2018.
- ***February***, the company received a cash payment of N$30,000 on its accounts receivable.
- ***March,*** the company got a N$200,000 cash loan from FNB Namibia. The company is expected to repay the loan in 5 equal annual payments.
- ***May,*** the company received a special loan valued at N$500,000 from the Development Bank of Namibia. The SME is only obligated to pay back the loan when it generates a profit during a given accounting period.

TOTAL MARKS **[25]**

QUESTION TWO [MARKS]

a. Briefly describe the financial statement you would use to assess the:
   a. liquidity position of a business.
   b. profitability position of a business. (4)
   c. creditworthiness of a business.
   d. worth created by a business for its owners.

b. The accompanying table shows comparative balance sheets for an Agribusiness for accounting periods ended 31 December 2016 and 2017.

	2016 (N$ '000)	2017 (N$ '000)
Cash	30	20
Accounts Receivable	200	260
Inventory	400	480
Gross Fixed Assets at cost	1,200	1,400
Less: Accumulated depreciation	400	600
Net Fixed Assets	800	800
Total Assets	**1,430**	**1,560**
Accounts payable	230	300
Accruals	200	210
Notes payable	100	100
Long-term debt	300	300
Common stock	100	100
Retained earnings	500	550
Total Liabilities and Equity	**1,430**	**1,560**

i. Prepare the firm's statement of cash flows for the year ended 31 December 2017. (15)

ii. Prepare the firm's owner's equity statement for the period ended 31 December 2017. (4)

iii. Interpret the statements you have prepared in part (i) and part (ii) above. (2)

TOTAL MARKS [25]

QUESTION THREE [MARKS]

a. Explain the differences between the following types of interest rates
   i. Nominal Interest Rate and Effective Annual Rate
   ii. Nominal Interest Rate and Real Interest Rate (3)
   iii. Compound Interest Rate and Simple Interest Rate

b. Describe the procedure used to amortise a loan into a series of equal annual payments. What is a loan amortization schedule? (4)

c. In brief explain how you can determine the size of the equal annual end-of-year payment necessary to accumulate a given future amount in a specified future period. (4)

d. Ms. Delia Angula, an emerging farmer, has N$50,000 that she can deposit in a savings account for a 3-year period at any of the three commercial banks – i.e., FNB, Standard Bank and Nedbank. Suppose FNB compounds interest on an annual basis; Standard Bank compounds interest twice a year; and Nedbank compounds interest each quarter. All the three banks have a stated (nominal) annual interest rate of 4%.

   i. What amount would Ms. Angula have at the end of the third year, leaving all the interest paid on deposit, in each bank? (6)

   ii. What effective annual rate (EAR) would she earn in each of the banks? (3)

   iii. On the basis of your findings in (i) and (ii) above, which bank should Ms. Angula deal with? Justify your answer. (2)

   iv. Suppose a fourth bank (Bank Windhoek) – also with a 4% stated annual interest rate – compounds interest continuously, on the basis of this information answer the following questions:
      a) how much would Ms. Angula have at the end of the third year? (3)
      b) Does this alternative change your recommendation in part (iii)? Give a justification for your answer.

TOTAL MARKS [25]

QUESTION FOUR **[MARKS]**

a. State and give a concise description of a financial planning tool that can be used to assess the financial impacts of: (4)

   i. small changes to an existing enterprise.

   ii. major changes to an existing enterprise.

b. Consider ABC Ltd a small enterprise involved in the production and marketing of Prosopis firewood. Currently, the company is harvesting Prosopis using hand tools. This process is not only labour intensive, but also constrains the company's firewood production capacity. To address this challenge the company is planning to acquire equipment in order to mechanise its Prosopis harvesting processes.

   The equipment would enable the company to increase the amount of Prosopis its harvesting from the current 5000 kg of firewood per week (with hand-tools) to 10 tons of firewood per week (with the harvesting equipment). The company sales its firewood in bags, whose average weight is 20 kgs. Each bag of Prosopis firewood is expected to be sold at N$150. (10)

   The total operating costs for the hand-tools and the harvesting equipment are estimated at N$2 per kg and N$0.5 per kg of harvested Prosopis. The ownership and overhead costs for the hand-tools and the equipment are estimated at N$2,000 and N$6,000, respectively.

   Question: On the basis of this information above, prepare a Partial Budget to evaluation the financial viability of acquiring the harvesting equipment. Should the company acquire the Prosopis harvesting equipment? Give a justification of your answer.

c. A Conservancy is attempting to evaluate the feasibility of investing N$95,000 in a honey production project. The honey production project is expected to generate end-of-year cash inflows of N$20,000, N$25,000, N$30,000, N$35,000 and N$40,000, from year 1 through year 5, respectively. The Conservancy has a 12% cost of capital.

   i. Calculate the payback period for the proposed honey production project. (2)

   ii. Determine the net present value of the proposed honey production project. (6)

   iii. Based on your answer in part (ii) above, what recommendation would you make relative to the implementation of the honey production project? Explain your answer. (3)

TOTAL MARKS **[25]**

THE END

Financial Ratios

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Inventory turnover} = \frac{\text{Cost of goods sold}}{\text{Inventory}}$$

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Total Sales}}$$

$$\text{Average Payment Period} = \frac{\text{Accounts payable}}{\text{Average purchases per day}}$$

$$\text{Times interest earned ratio} = \frac{\text{Net profit before interest and tax}}{\text{Interest expense}}$$

$$\text{Operating Profit Margin} = \frac{\text{Operating Profit}}{\text{Sales}}$$

$$\text{Return on Equity} = \frac{\text{Net Profit after taxes}}{\text{Total Equity}}$$

$$\text{Asset turnover} = \frac{\text{Sales}}{\text{Total Assets}}$$

$$\text{Quick Ratio} = \frac{\text{Current Assets less Inventory}}{\text{Total Current Liabilities}}$$

$$\text{Average Collection Period} = \frac{\text{Accounts receivable}}{\text{Average Sales per day}}$$

$$\text{Debt ratio} = \frac{\text{Total liabilities}}{\text{Total Assets}}$$

$$\text{Financial leverage multiplier} = \frac{\text{Total assets}}{\text{Equity}}$$

$$\text{Net Profit Margin} = \frac{\text{Net Profit after taxes}}{\text{Sales}}$$

$$\text{Return on Assets} = \frac{\text{Net Profit after taxes}}{\text{Total Assets}}$$

Time value formulas

$$PV = FV(1+i)^{-n}$$

$$PV = CF \times \left[\frac{1-(1+i)^{-n}}{i}\right]$$

$$PV = \frac{P_1}{(1+i)^1} + \frac{P_2}{(1+i)^2} + \frac{P_3}{(1+i)^3} + \cdots + \frac{P_n}{(1+i)^n}$$

$$FV = PV(1+i)^n$$

$$FV = CF \times \left[\frac{(1+i)^n-1}{i}\right]$$

$$FV = PVe^{i\times n}$$

Other Formulas

$$\textit{Annual Depreciation} = \frac{(cost-salvage\ value)}{useful\ life}$$

$$\textit{Annual Depreciation} = \frac{R}{n} \times BV$$

Where R is decline balance rate; n is useful life; and BV is the book value at the beginning of the year.

$$\textit{Break-even quantity} = \frac{Total\ cost}{Expected\ Output\ price}$$

$$\textit{Break-even price} = \frac{Total\ cost}{Expected\ Output}$$

$$\textit{Sum-of-the-year digits} = (cost - salvage\ value) \times \frac{RL}{SOYD}$$

Where RL is the remaining life and SOYD $= \frac{n(n+1)}{2}$.

$$\textit{Break-even point} = \frac{Total\ Fixed\ Cost}{price-Average\ Variable\ cost}$$