NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY

FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES
DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION : BACHELOR OF NATURAL RESOURCES MANAGEMENT (NATURE CONSERVATION)	
QUALIFICATION CODE: 07BNRS	**LEVEL:** 6
COURSE CODE: FMG620S	**COURSE NAME**: FINANCIAL MANAGEMENT FOR NATURE CONSERVATION
DATE: NOVEMBER 2022	
DURATION: 3 HOURS	**MARKS:** 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER(S)	M LUBINDA
MODERATOR:	S KALUNDU

INSTRUCTIONS
1. Answer ALL the questions.
2. Write clearly and neatly.
3. Number the answers clearly.

PERMISSIBLE MATERIALS

1. Examination question paper
2. Answering book
3. Calculator

THIS QUESTION PAPER CONSISTS OF 4 PAGES (Excluding this front page)

QUESTION ONE   **[MARKS]**

a. Give a concise description of the methods that are used to depreciate working assets.   (6)

b. Consider a de-bushing equipment whose purchasing cost, terminal value, and useful life are N$550,000, N$50,000, and 4 years. Using the sum-of-the-year depreciation method, prepare a depreciation schedule for the de-bushing equipment. Your schedule should show the annual depreciation expense, accumulate depreciation, and book value.   (5)

c. Suppose a farmer presents to you the following financial information about his bush-to-feed operation.

item	Value
Bush-to-feed output (in tons per hectare)	100
Price of bush-to-feed (in N$ per ton)	4, 500
Direct cost (N$ per ton)	1,250
Overhead costs (N$ per ton)	1,450

Use the data to answer the questions below.

i.   Estimate the net return (profit) per hectare.   (4)

ii.   Estimate the break-even price and break-even quantity.   (4)

iii. Use the information to prepare an enterprise budget, whose base unit is per bag. Assume a bag of bush-to-feed weighs 50 kilograms.   (6)

Total marks   **[25]**

QUESTION TWO   **[MARKS]**

a. Give a concise description of the double entry system.   (5)

b. The accompanying table shows scrambled income statement and balance sheet accounts for Conservancy for the year ended December 31, 2019.

Item	Value (N$), December 31, 2019
Sales revenue	160,000
Accounts payable	22,000
Accounts receivable	25,000
Marketing expense	16,000
Common stock	32,000
Accumulated Depreciation	32,000
Capital gain	7,500
Buildings and equipment	90,000
Cash	1,500
Cost of goods sold	106,000
Depreciation expense	10,000
General and administration expenses	10,000
Inventories	45,500
Land	26,000
Long-term debts	94, 450
Miscellaneous expenses	1,000
Interest expense	6,100
Notes payable	47,000
Equipment	116,000
Taxes	4,360
Retained earnings	26,550
Accruals	50,000

   i. Use the appropriate accounts to prepare an income statement for Conservancy for the year ended December 31, 2019. The income statement should show all the relevant sections.   (10)

   ii. Use the appropriate accounts to prepare a balance sheet for Conservancy for the year ended December 31, 2019. The income statement should show all the relevant sections.   (10)

TOTAL MARKS   **[25]**

QUESTION THREE   [MARKS]

a. Suppose you have been asked to give a talk on financial statements to members of a conservancy. Based on what you have learned in this course, what would be the main points in your presentation? (5)

b. A Community Forest recorded sales of N$60,000 in September. For the months of October through December, Community Forest forecasts sales of N$70,000 per month. At the beginning of October, the Community Forest had a cash balance of N$30,000. Additional information about the timing of the cash receipts and payments for Community Forest are as follows:

- The Community Forest receives 80% of its sales in cash and collects the remaining 20% in the following month.
- Expected monthly cash purchases are estimated at N$45,000 for October through December.
- Other monthly expenses are estimated at 20% of the current month's sales.
- A loan repayment of N$43,000 is due in November.
- A N$26,000 cash purchase of equipment is expected in October.

Using the information provided above, prepare a cash flow budget for Glen Enterprise for the months of October, November, and December. Furthermore, based on the cash flow budget you have prepared, estimate the cash deficit/surplus that is expected to be experienced by the Community Forest during the period October to December. (20)

TOTAL MARKS   **[25]**

QUESTION FOUR   [MARKS]

a. The accompanying table shows financial data and ratios for the Games Product Trust Fund for the accounting period ended 31 December 2021.

Sales revenue generated	N$800,000
Gross profit margin	90%
Net profit margin	8%
Return on Equity	20%
Total asset turnover	2 times

Based on solely on the information provided in the table above, estimate the dollar values of the following income statement and balance sheet accounts:

   i.   Total assets   (3)

   ii.   Cost of goods sold   (3)

   iii. Total liabilities   (4)

b. A farmer bought a Toyota pick-up using a loan from a bank. The original principal amount borrowed was N$600,000 and the annual interest was 10%. The loan is to be repaid over 4-years period. Assuming that the loan is amortised into four equal annual payment, prepare a loan amortization schedule showing the interest and principal breakdown of each of the four annual loan payments. (4)

c. An agribusiness SME is considering two mutually exclusive projects. Each requires an initial investment of N$400,000. The accompanying table shows the after-tax cash inflows associated with each project.

Year	Project A (N$)	Project B (N$)
1	150,000	200,000
2	150,000	300,000
3	150,000	50,000
4	150,000	50,000

   i.   Estimate the Payback Period for each project. Rank the projects based on their Payback Period. (4)

   ii.   Assuming a discount rate of 10%, calculate the NPV for each project. Rank the project based on the calculated NPVs and select the best project. Explain your answer. (7)

TOTAL MARKS   **[25]**

THE END

Financial Ratios

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Time value formulas

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

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

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

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

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

$$FV = P_1(1 + i)^{n-1} + P_2(1 + i)^{n-2} + \cdots + P_n$$

Other Formulas

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

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

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

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

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

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

$$\text{Break-even quantity} = \frac{Total\ cost}{Expected\ output\ price}$$