



“Investing in Africa’s future”

COLLEGE OF HEALTH AGRICULTURE & NATURAL SCIENCES

NAEC 401: FARM MANAGEMENT AND FARM PLANNING

END OF FIRST SEMESTER FINAL EXAMINATIONS

NOVEMBER 2022

LECTURER : DR K. MUKUMBI

DURATION : 3 HOURS

INSTRUCTIONS

1. Do not write your name on the answer sheet

2. Use Answer Sheets Provided

3. Begin your answer for Each Question on a New Page

4. Credit is Given for Neat Presentation

SECTION A

Answer **ALL** questions in this section

QUESTION 1

Read the passage below and answer the questions that follow.

Padenga has a long and rich heritage in Zimbabwe, with one of its three production farms being the first, and therefore oldest commercial crocodile farm ever established in the country. Kariba Crocodile Farm (KCF) was established in 1965 as a small, family run farming operation. The establishment of this farm was testament to the foresight and perseverance of the original owners as its development preceded any formal recognition of the value of sustainable utilization of wildlife species. From that start, the Farms that constitute Padenga today have followed a long and sometimes challenging pathway to become the successful operation that exists today. Over that period the business has demonstrated its ability to adapt and flourish in the changing, and often trying circumstances resultant from organisational changes, political and economic difficulties, and more recently, the impact of the global financial crisis and the market recession that resulted from it.

Today, Padenga is one of the world's leading suppliers of premium quality crocodilian skins, accounting for nearly 85% of the supply of Nile crocodile skins to high end luxury brands globally. Padenga entered the alligator industry in the southern USA and is in partnership in an operation producing watchband size and medium size skins of premium quality for the top end luxury and fashion brands. Padenga also produces crocodile meat from its export approved abattoir for sale to European and Asian markets.

Below is an extract from Padenga's financial statements.

	2021 (US\$)	2020 (US\$)	2019 (US\$)
Current assets	69 821 510	74 934 401	65 392 491
Current liabilities	41 592 904	44 409 200	14 896 215
Non-current assets	99 972 194	76 063 947	33 258 784
Non-current liabilities	47 970 837	19 164 498	15 230 384
Net loss/income before taxes	-6 437 410	4 084 376	8 591 851
Net loss/ income after taxes	-7 382 260	3 206 909	6 744 586
Owners' equity	80 229 963	87 424 650	68 524 676
Sales	78 466 352	71 605 783	29 127 509
Cost of goods sold	49 330 279	44 145 557	11 569 862

Instructions for calculations:

- calculate the ratios for the 3 years (2021, 2020, and 2019)
- show working and formulas
- round off your answers to 2 decimal places

- a) Calculate the following ratios:
- i. Current ratio (6 marks)
 - ii. Return on equity (6 marks)
 - iii. Debt to asset ratio (6 marks)
 - iv. Gross profit ratio (6 marks)
- b) What do the values of the ratios for the 3 years tell you about the financial performance of Padenga? Comment on each of the ratios below:
- i. Current ratio (3 marks)
 - ii. Return on equity (3 marks)
 - iii. Debt to asset ratio (3 marks)
 - iv. Gross profit ratio (3 marks)
- c) List the four types of budget discussed in class. (4 marks)

SECTION B

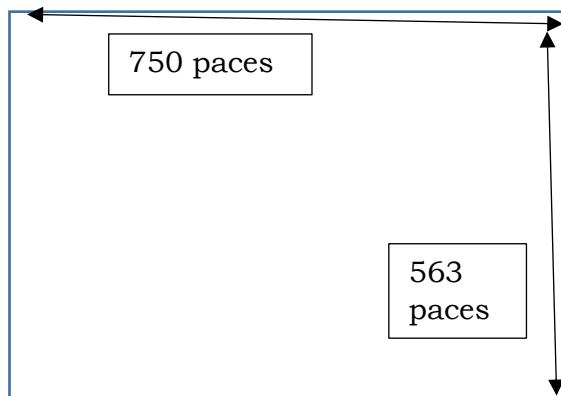
Answer any **THREE** questions in this section

QUESTION 2

- a) What do the letters GPS stand for? (3 marks)
- b) Give six uses of GPS in farming. (6 marks)
- c) *Read the passage below and answer the questions that follow.*

Ann would like to estimate the size of her field by pacing. Her pace is 0.72m/pace.

Ann's field



- i. Calculate the area of Ann's field in m^2 . (3 marks)
- ii. Calculate the area of Ann's field in hectares. (3 marks)
- iii. Describe 3 alternative methods for measuring the area of a field on a farm. (5 marks)

QUESTION 3

a) Tendai had a broiler project. His record keeping showed the following:

Purchased 1200 day-old chicks for \$0.65 each.

Feed used: Broiler starter mash- 20 bags @\$33 each

Broiler finisher mash 60 bags @\$36 each

Medicines- \$90

Labour- Joel- Two months @\$75 per month

Brighton (security) Two months @\$56 per month

Casual employees for slaughtering- \$50 total

Wood shavings- no charge but the transport cost \$30

Water -\$25

electricity- \$40

Plastic bags \$37

Sales- 1018 dressed birds, total of 1317 kg of meat @\$3.90 per kg

Offals and heads- \$55 total

Copy the table below into your answer below and complete it using the information given. Calculate returns, variable costs, gross margin, return/\$VC. (15 marks)

	Unit	No. of units	Price per unit USD	Total USD
Returns (income)				
Total returns				
Variable costs				
Total variable costs				
Gross margin				
Return/\$VC				

b) i. What is the difference between economies of size and diseconomies of size? (2 marks)

ii. How can a farm manager apply the concept of economies of size to their farm business? (3 marks)

QUESTION 4

- a) What is precision farming? (2 marks)
- b) Describe the importance of precision farming? (4 marks)
- c) Describe 4 benefits and 4 challenges associated with precision farming? (8 marks)

d) Read the passage below and answer the questions that follow.

A farm had total expenses (overhead and variable costs) of \$15,600. Where overhead expenses were \$5,600.

Overhead percentages were assigned as follows:

Broilers- 45%

Layers- 30%

Pigs- 20%

Goats – 5%

The four enterprises on the farm had total variable costs of \$10,000, with the following allocation:

broilers-\$ 4,000

layers- \$3,000

pigs- \$2,000

goats- \$1,000

TOTAL \$10,000

- i. Copy the table below into your answer booklet and complete all the empty boxes.

Show your working, outside the table.

(6 marks)

	TVC	Assigned % of overhead	Assigned amount of overhead	Total costs
broilers		45		
layers		30		
pigs		20		
goats		5		
TOTAL	10,000	100	5,600	15,600

QUESTION 5

- a) List 4 advantages and 4 disadvantages of land ownership. [Present your answer in the form of a table] (7 marks)
- b) Name 3 advantages and 3 disadvantages of leasing land. (6 marks)
[Present your answer in the form of a table]
- c) Daniel has a variable cash lease.
- i. Daniel wants to calculate his payment. The landlord requires a 43% percent of the gross income earned from the crops on the leased land as the lease payment. Daniel has a gross income of \$65 000 and a net income of \$50 000.
What is the amount of his lease payment? (2 marks)
[Show your working]
- ii. Daniel and his landlord have agreed on base payment \$80/ha, for a wheat yield of 2.5 tons/ha and price of \$500/ton. Actual yield is 2tons/ha but price is \$900/t. Calculate Daniel's actual lease payment. (5 marks)
[Show your working]

END OF EXAMINATION PAPER