FACULTY	**Health Sciences and Veterinary Medicine**		
SCHOOL	**School of Veterinary Medicine**		
DEPARTMENT	**Preclinical Department**		
SUBJECT	**Animal Production**		
SUBJECT CODE	**V3603EP**		
DATE:	**4 November 2024**		
DURATION	**3 hours**	**MARKS**	**150**

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External Moderator: Prof. CM Mnisi

This question paper consists of 14 questions and 5 pages including this front page.

Instructions

Answer all Questions

Write legibly and concisely

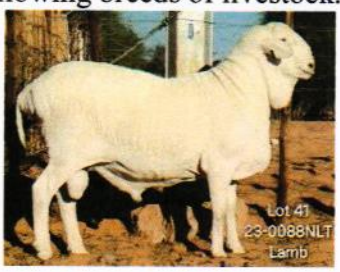
No additional material is required

SECOND OPPORTUNITY EXAMINATION

1	Informal markets have a major role in food security in the Namibian livestock production system. However, what could be the risks of buying products at an informal market?	3
2	The Ministry of Agriculture, Water and Land Reform is a major stakeholder of the livestock production industry and the custodian of animal health and production in the country. Outline five (5) of the main responsibilities of the Ministry regarding the international trade of livestock and livestock products.	5
3a	Explain possible genetic [3] and non-genetic [5] influences for poor bull fertility.	8
3b	Explain why you would breed heifers a cycle before the cows?	2
3c	Use your knowledge of the % growth rate at mating and calving of a heifer to show how you would calculate the following when the mature weight of a Brahman cow is 500kg. i. the weight of a heifer at mating by 15 months (450days), [2] ii. growth requirement per day if the heifer is weaned at 240 days weighing 200kg [2]	4
4	Discuss six (6) of the objectives of a Health Management Plan in a Beef Cattle Feedlot.	6
5a	With reference to colostrum intake, explain why extra care must be taken not to expose calves between 14 and 21 days of age to any predisposing factors of infections.	2
5b	What is meant by "persistent producers" with reference to dairy production?	2
5c	In cases where herd fertility problem is experienced in dairy cows, it is important to find the cause. Outline five (5) of the main factors to look at that will help pinpoint the herd fertility problem.	5
5d	Explain why the negative energy balance is a predisposing factor for early lactational ketosis.	5
5e	Use a diagram of the lactation curve stages to demonstrate the association between milk production, dry matte intake, and body condition. (No discussion is necessary)	5
5f	California Mastitis Test (CMT) remains the most reliable screening test for subclinical mastitis. Describe how you would sample milk for mastitis using CMT.	4
	Candidate to provide the following: • Test milk from individual quarters or bulk samples. [1] • The first stream during milking. [1] • Draw milk in separate cups of a four-cup paddle [1] • Tilt the paddle to equalize the milk content about ½ a teaspoon each. [1] • Add the same amount of reagent to each cup. [1] • Forms small clumps in a moderate reaction. [1] • Forms a gelatinous mass clinging together in a strong reaction. [1]	

6a	Discuss the concepts of the female reproductive cycle that affect the fertility of the ewe. Include appropriate hormones in your answer.	6
6b	Give the formula for calculating (a) lambing % and (b) weaning of sheep.	2
7	Explain the most critical purposes that make the Namibia Livestock and Traceability System (NamLITS) a credible tool for the Namibian livestock industry that is bench marketed by many African countries.	4
8a	When selecting replacement gilts, explain the 2 testing methods that the genotypic selection should be based on to show good genetics.	2
8b	Farrowing is a critical period in pig production. Outline the precautions a farmer should take to ensure successful farrowing of sows i. in the farrowing house [4] ii. and for general health management [2]	6
8c	Fill in the following missing words regarding gastric ulcers causes in pigs. Gastric ulcers in pigs can be caused by deficiency of Vitamin ..... and ..... micromineral deficiency in the diet, and mineral toxicosis of.....	3
8d	Describe the importance and correct way of flushing feeding sows and gilts.	3
8e	You were called out to a farm and noticed that early weaning is the cause of the low production at the piggery. What could be five (5) of these problems noticed with the early weaning of piglets?	5
9a	Outline the process of candling of eggs during incubation.	6
9b	What is the feeding strategy behind the *Layer Mash 110*?	2
9c	What would be the major advantage of the spot brooding system in a poultry house?	1
9d	This egg was laid. Explain the appearance and cause of this phenomenon. [3] What advice would you give to the farmer regarding such eggs? [2] 	5

9e	What practical advice would you give to a farmer in Namibia who is adopting a deep litter system for layers?	5
10a	The livestock agents offer their services for marketing to formal abattoirs. List three (3) of their main functions to ensure proper marketing of livestock.	3
10b	Outline eight (8) of the the remedial strategies that could be implemented in the northern communal areas of Namibia (NCA) to mitigate the marketing challenges of livestock and livestock products in the area.	8
11a	Outline seven (7) of the factors that should be considered when designing a layout for livestock handling facilities?	7
11b	Discuss the importance and requirements of corridors in a farm setup.	5
12a	Explain how you will mitigate the impact of climate change on the ecosystems and rangelands.	5
12b	The effect of climate change on livestock production occurs both directly and indirectly. Explain how animal production is directly impacted.	5
13	State and discuss the purposes of the disease control zones and Veterinary Cordon Fence (VCF) in Namibia?	6
14a	Identify the breed of cattle and list six (6) advantages of farming with this breed in Southern Africa. 	6

14b	Identify the following breeds of livestock. i.  ii.  iii.  iv. 	4
	i. Van Rooy sheep [1] ii. Hereford [1] iii. Hamshire pig [1] iv. Sussex chicken	
	END OF PAPER	