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

Examiners: Dr. B Kaurivi
Internal Moderator: Dr. P Mbiri
External Moderator: Prof. CM Mnisi

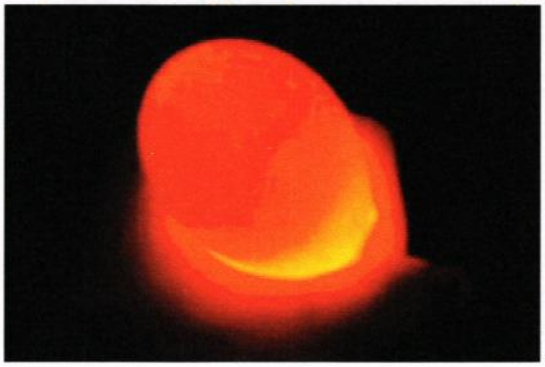
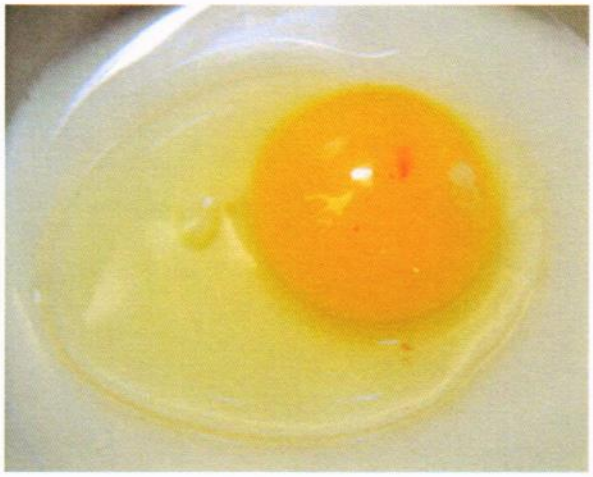
This question paper consists of 14 questions and 5 pages including this front page.

Instructions
Answer all Questions
Write legibly and concisely
No additional material is required

FIRST OPPORTUNITY EXAMINATION

1	Define "farming system" in the context of Namibia. (Note that some points carry half a mark).	3
2	The FAN Meat Scheme is a farm assurance scheme that provides assurance regarding the safety, wholesomeness, and quality of the Namibian meat. List six (6) of the guarantees that this scheme provides regarding meat quality.	6
3a	Dystocia can be a welfare risk to beef cattle. Outline any six (6) precautions that you would advise a farmer to consider in order to reduce dystocia and ensure good fertility in beef cattle.	6
3b	Considering Namibia's rainfall pattern, what could be the best time to start the breeding season for beef cows?	1
3c	Give advice to a farmer whose beef herd is experiencing a low calving rate on how he can maximize the reproductive cycle of a cow postpartum to strategize that the majority of the cows get a calf per year. Use appropriate figures where necessary.	6
3d	In a table format, compare the use of a castration ring and burdizzo in calves, focusing on the age of calves and describing the methods and precautions that should be taken for both methods.	6
3e	Stud breeders tend to over-fatten their bulls. Outline the physiological mechanism explaining why overfeeding bulls leads to low sperm quality.	3
4	What cattle are sought after at an auction or farm to be destined to the feedlot.	4
5a	California Mastitis Test (CMT) remains the most reliable screening test for subclinical mastitis. i. What results would you expect from a positive case? [2] ii. What is the principle behind the CMT reagent? [2]	4
5b	Fill in the missing words regarding dairy production. i. ..... milking parlors are located at the end of a rectangular holding area, allowing cows to enter single-file as a group. ii. Even when there are no clinical signs, a cow's milk production begins to decline when its somatic cell count is greater than ..... cells/ml. [1] iii. Colostrum with a reading below 22 % should be discarded when using a	3
5c	Explain why a high "lactation persistency" is an economically important trait of dairy animals.	3
5d	Explain why a farmer should not exceed 1 litre of milk fed to a new-born calf [2] and give advice on the best milk-feeding strategy. [2]	4

5e	Name the diseases/conditions that fit the following description in dairy cows. i. Vitamin D also ensures that the absorption of calcium from the intestines and bones is increased. ii. Propylene glycol is important in the treatment/prevention of this disease condition. iii. Excess consumption of concentrates (grain) is a predisposing factor to this disease condition.	3
6a	Explain the meaning of ram or buck effect and its role in improving the fertility of the doe/ewe.	6
6b	Discuss why a farmer should ensure or synchronise his sheep to breed during the autumn mating season (Apr- May).	5
6c	Which deficiencies are associated with lambs/kids born from a dam that had the following disease conditions? i. Swayback in the lamb ii. Eye and bone malformations iii. Goitre in the unborn lamb	3
7	Describe any four (4) pointers of the official identification of small stock in Namibia.	4
8a	Explain what "boar taint" means in pork production and what its implications are.	3
8b	Outline the parameters you would consider during regular pig farm visits, focusing on the <u>disease symptoms.</u>	6
8c	Discuss gastric ulcers in pigs under the following headings: i. Finely ground feed contributes to gastric ulcers formation [3] ii. Preventative methods using milling of feed [2]	5
8d	Give two (2) <u>specific examples of the potential disease risks</u> the multi-stage pig facility will face if effective biosecurity is not maintained.	2
8e	Explain why piglets should be provided with creep ration one-week after birth. Use appropriate digestive hormones in your answer.	3
8f	Discuss why the color and texture of meat are some of the main criteria used in carcass evaluation in the commercial pork industry.	5
9a	Discuss any six (6) **health problems** associated with the battery cage system that will make you discourage a new poultry farmer from starting with this system.	6
9b	Create a table and compare the starter mash feeding strategy of the layers and broilers pullets.	4

9c	What is the term used for this candled egg? Give 2 main reasons for your answer. 	3
9d	Write short notes on the description and functions of a germinal disc in egg production.	3
9e	Study the picture below of an opened fresh egg and explain how these blood spots occurred. 	3
9f	What practical advice would you give a farmer before using an artificial egg incubator to maximize production?	5
10	What is the importance of Sanitary and Phytosanitary Agreement (SPS) measures of the World Trade Organization (WTO) in international trade?	3
11	Neck clamps are essential components of cattle kraals. What could be the disadvantages of using neck clamps?	3
12a	Provide any three (3) practical measures a farmer can adopt to reduce the impact of climate change on the availability of water in Namibia	3

12b	Discuss six (6) ways in which climate change has made an impact on animal diseases.	6
13	Passive surveillance is an important strategy for animal disease control in Namibia. State six (6) passive surveillance activities practiced in the country.	6
14a	State two (2) adaptive characteristics that will ensure a breed is resistant to ticks.	2
14b	Cattle have been divided into two basic classifications. Name these two classifications and explain what the classification for the breeds was mainly based on.	3
14c	Identify the following breed of cattle. Taking into consideration the careful cross-breeding of these two breeds, what breed complementarities would you get from this breeding exercise?  	6
	END	