



NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY
FACULTY OF HEALTH, NATURAL RESOURCES AND APPLIED SCIENCES
DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES SCIENCES

QUALIFICATION: BACHELOR OF SCIENCE IN AGRICULTURE	
QUALIFICATION CODE: : 07BAGA	LEVEL: NQF LEVEL 6
COURSE CODE: SHN611S	COURSE NAME: SUSTAINABLE NON RUMINANT HUSBANDRY
DATE: NOVEMBER 2022	
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER:	DR HIMA R. AMWELE
MODERATOR:	MRS LUCIA TUYENI-KELAO

INSTRUCTIONS
<ol style="list-style-type: none">1. Answer all questions2. Number the answers clearly3. Report all your answers to the correct significant figures

THIS QUESTION PAPER CONSISTS OF 2 PAGES (Excluding this front page)

Question 1

Fill in the missing words on functions of the fish fins. (11)

The fish has two pair of fins: (a). and (b).

Both sets of fins are used for (c)., (d). and (e).

Pelvic fins -each of a pair of fins on the underside of a fish's body, attached to the pelvic girdle and helping to (f).

(g).fins are used for braking.

The unpaired dorsal and anal fins are used for (h). and (k).

specially at (l).

The (m). fin is used for propulsion (acceleration).

Question 2

Rearrange the fish organ to correspond with their functions? (8)

Organs	Functions
Gill lamellae	Regulate the buoyancy of the fish
Swim bladder	Defense against external parasites and aids in streamlining the body of the fish
Body cavity	Respond to current water flow mechanism that enables them to take up oxygen by osmosis across cell membrane
Epidermis	Houses the internal organs

Question 3

Explain how the fish move gas into and out of the swim bladder. (5)

Question 4

Explain the osmoregulation of marine and freshwater fish. (10)

Question 5

Fill in the missing type of infection and diseases of fish? (7)

Type of infections	Diseases
a.	Trichodiniasis
b.	Chilodonellasis
Ectoparasitism	c.
d.	Sanguinicolosis
e.	Saprolegniasis
Parasites	f.
g.	Vibriosis

Question 6

Indicate whether the following statements are true or false.

6.1 The chicken skin is free of secretory glands (1)

6.2 The comb color can tell you what color egg the chicken will lay. (1)

6.3 Female hackle and saddle feathers have rounded ends (1)

6.4 The comb functions as cooling system (1)

- 6.5 Earlobe cools themselves by circulating the blood throughout the comb and wattles (1)
 6.6 Male hackle and saddle feathers have pointed tip and are shinier. (1)
[6]

Question 7

- 7.1 What is the function of medullary bone? (2)
 7.2 Name 5 bones of poultry where medullary is found? (5)
[7]

Question 8

Answer the following question on anthrax and blackquarter:

- a) Name the bacteria that cause anthrax? (1)
 b) How does the bacteria spread? (2)
 c) How should the carcass be handled? (2)
 d) How to prevent the transmission of the bacteria? (1)
 e) Name the bacteria that causes blackquarter? (1)
 f) What parts of the body is likely to affect? (2)
 g) What are the symptoms of blackquarter? (3)
[12]

Question 9

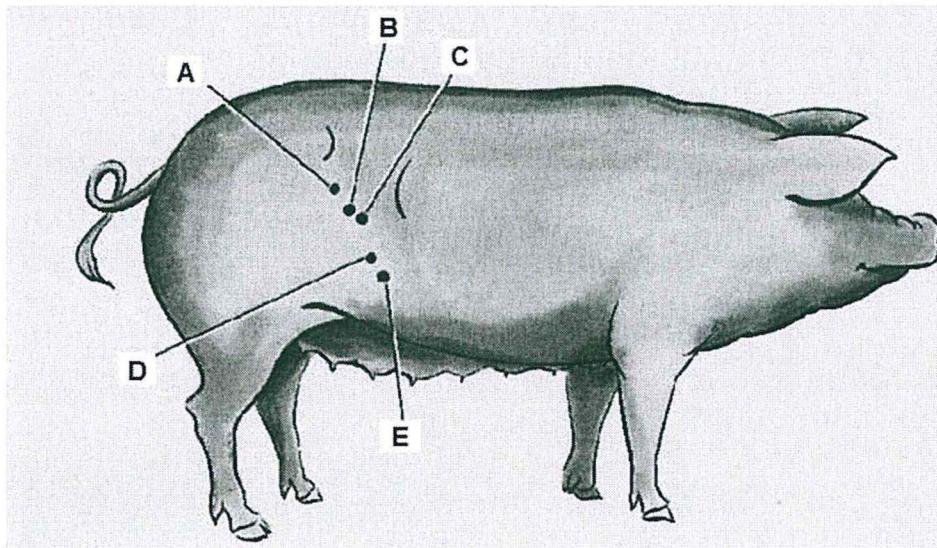
- 9.1 Explain the advantages of pig artificial insemination? (6)
 9.2 Explain how to collect the semen from boar? (10)
[16]

Question 10

Explain how the environmental temperature affects the pig heat production and body temperature. (10)

Question 11

Label the variation in position of sow right ovary during third pregnancy. (5)



Total:.....[100]