



**NAMIBIA UNIVERSITY
OF SCIENCE AND TECHNOLOGY**

FACULTY OF HEALTH AND APPLIED SCIENCES

DEPARTMENT OF NATURAL AND APPLIED SCIENCES

QUALIFICATION: BACHELOR OF SCIENCE	
QUALIFICATION CODE: 07BOSC	LEVEL: 7
COURSE CODE : ASF701S	COURSE NAME: ANIMAL STRUCTURE AND FUNCTION
SESSION: JULY 2019	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

SUPPLEMENTARY/SECOND OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER	DR LAMECH MWAPAGHA
MODERATOR	DR SETH JOHANNES EISEB

INSTRUCTIONS	
<ol style="list-style-type: none">1. Answer ALL the questions.2. Write clearly and neatly.3. Number the answers clearly.4. All written work MUST be done in BLUE or BLACK ink.	

PERMISSIBLE MATERIALS

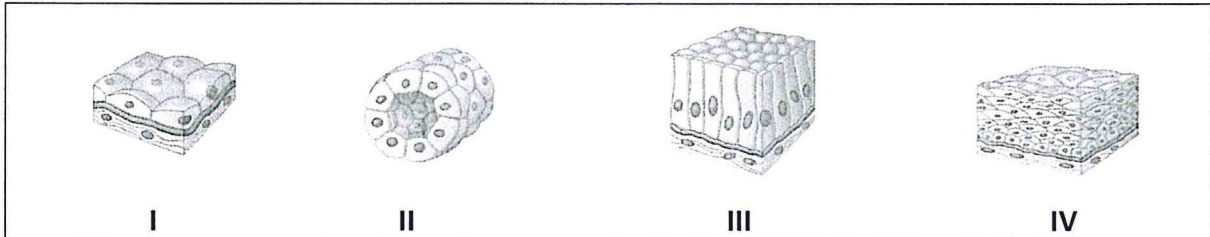
None

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

Question 1

[9]

- a) Briefly describe the Loose connective tissues. (4)
- b) Epithelial tissue covers the outside of the body and lines the organs and cavities within the body; it contains cells that are closely joined as shown in the figure below.



- I. Identify the different types of tissues in I - IV. (2)
- c) Describe the **THREE (3)** kinds of connective tissue fibers. (3)

Question 2

[13]

- a) Describe the following terminologies; (5)
- I. Basal metabolic rate (BMR)
 - II. Bioenergetics
 - III. Standard metabolic rate (SMR)
 - IV. Metabolic rate
 - V. Torpor
- b) State the **THREE (3)** main glands that produce and secrete saliva. (3)
- c) Briefly explain the thermoregulatory behavioural adaptations of the dragonfly. (5)

Question 3

[15]

a) Describe **FIVE (5)** bone functions.

(5)

b) Distinguish the following bone disorders;

(6)

I. Strain

II. Sprain

III. Dislocation

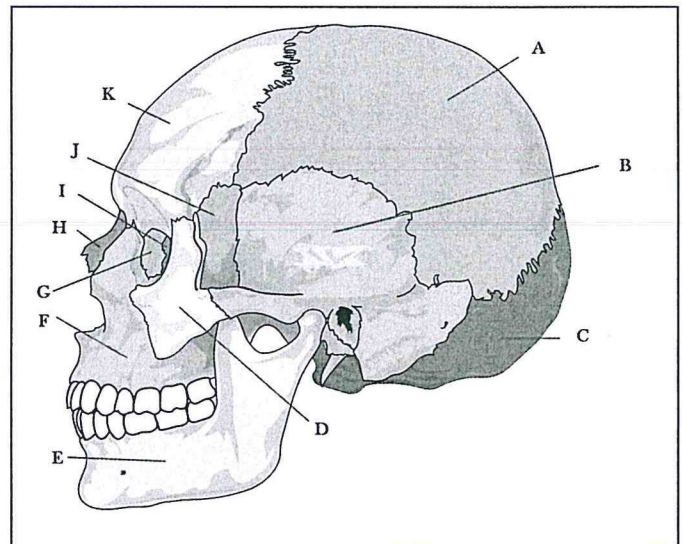
IV. Simple fracture

V. Complete fracture

VI. Compound fracture

c) The human skull consists of more the two dozen bones. Match the following bones to their locations (A-K) on the human skull below. NB: // each bone **ONLY** matches one letter. (4)

- I. Shenoid bone -
- II. Parietal bone -
- III. Lacrimal bone -
- IV. Temporal bone -
- V. Frontal bone -
- VI. Ethmoid bone -
- VII. Occipital bone -
- VIII. Zygomatic bone -



Question 4 [16]

- a) Explain the main stages of food processing. (4)
- b) Briefly describe the walls of the digestive tract. (4)
- c) Elaborate on the functions of **FOUR (4)** hormones that help coordinate the secretion of digestive juices into the alimentary canal. (8)

Question 5 [17]

- a) Briefly discuss the mammalian heart circulation pathway. (5)
- b) Discuss how the medulla oblongata and the pons control breathing in humans. (12)

Question 6 [16]

- a) Briefly describe the key functions of most excretory systems. (8)
- b) Discuss the regulation of kidney function. (8)

Question 7 [14]

- a) Discuss the mode of action of phagocytic cells. (6)
- b) Describe how Rhesus (Rh) incompatibility may lead to Erythroblastosis fetalis and how this disease can be treated. (8)

THE END