



**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: JUNE 2019	PAPER: THEORY
DURATION: 3 HOURS	MARKS: 100

FIRST OPPORTUNITY EXAMINATION QUESTION PAPER	
EXAMINER	DR LAMECH MWAPAGHA
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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

[12]

- a) State **FIVE (5)** functions of the Nervous tissue. (5)
- b) Briefly describe the Epithelia tissue. (4)
- c) Explain how animals show a correlation between structure and function. (3)

Question 2

[14]

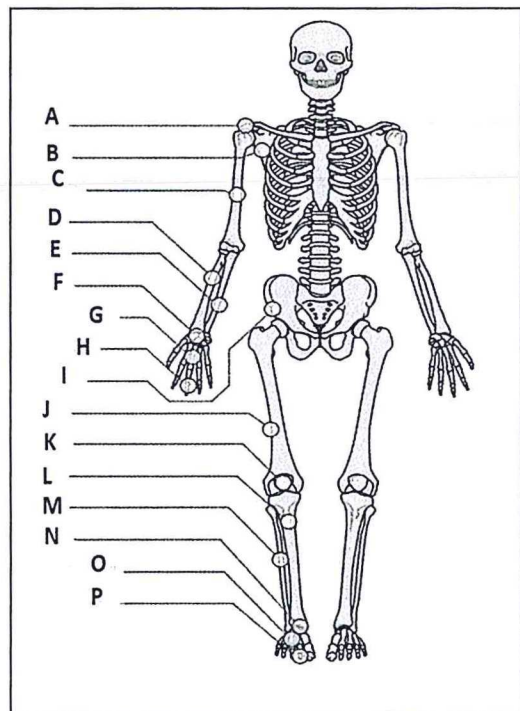
- a) List **FOUR (4)** adaptations that help animals thermoregulate. (4)
- b) Describe how the hypothalamus enables thermoregulation in humans. (10)

Question 3

[16]

- a) Describe bone formation. (4)
- b) The appendicular skeleton is the portion of the skeleton of vertebrates consisting of the bones that support the appendages. Match the following bones to their locations (A-P) on the skeleton below. NB: // Each bone **ONLY** matches one letter. (12)

- I. Ulna -
- II. Metacarpals -
- III. Clavicle -
- IV. Tibia -
- V. Humerus -
- VI. Phalanges -
- VII. Metatarsals -
- VIII. Femur -
- IX. Patella -
- X. Scapula -
- XI. Tarsals -
- XII. Carpals -



Question 4

[16]

- a) Describe the Diencephalon part of the brain. (6)
- b) Briefly describe **THREE (3)** stages of information processing in the nervous system. (6)
- c) State the symptoms of the following disorders of the Nervous System; (4)
 - I. Alzheimer's disease (AD)
 - II. Schizophrenia

Question 5

[14]

- a) Briefly describe the following sensory receptors; (10)
 - I. Electromagnetic receptors
 - II. Pain receptors
 - III. Mechanoreceptors
 - IV. Thermoreceptors
 - V. Chemoreceptors
- b) The following are some of the functions performed by sensory receptors. Explain (4)
 - I. Sensory transduction
 - II. Transmission

Question 6

[16]

- a) Distinguish oogenesis from spermatogenesis. (6)
- b) Discuss the process of sperm nucleus entry during fertilisation. (10)

Question 7

[12]

- a) Explain the major events of a local inflammatory response following an injury. (4)
- b) Describe the functions of the following classes of immunoglobulins; (8)
- I. IgM
 - II. IgE
 - III. IgG
 - IV. IgA

THE END