



MASINDE MULIRO UNIVERSITY OF SCIENCE AND TECHNOLOGY

(MMUST)

MAIN AND NAIROBI CAMPUS

**UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR**

FIRST YEAR, SECOND TRIMESTER EXAMINATION

**FOR THE DEGREE
OF
BACHELOR OF SCIENCE IN HEALTH PROFESSIONS EDUCATION**

COURSE CODE: NUR 106

COURSE TITLE: HUMAN ANATOMY II

DATE: Friday 27/07/2018 TIME: 9.00-12.00 NOON

INSTRUCTIONS TO CANDIDATES

All questions are compulsory

Section A: Multiple Choice questions (MCQ's) (20 Marks).

Section B: Short answer questions (SAQ's). (40 Marks).

Section C: Long answer questions. (LAQ's) (40 Marks).

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 4 Printed Pages. Please Turn Over.

Section A: Multiple Choice Questions (MCQS)**20 Marks**

1. Which of the following anatomical structures is *not* part of the conducting zone?
 - A. Pharynx
 - B. Nasal cavity
 - C. Alveoli
 - D. Bronchi
2. The following occurs during the chloride shift:
 - A. Chloride is removed from the erythrocyte.
 - B. Chloride is exchanged for bicarbonate.
 - C. Bicarbonate is removed from the erythrocyte.
 - D. Bicarbonate is removed from the blood.
3. Increased ventilation that results in an increase in blood pH is called _____.
 - A. Apnea
 - B. Hyperpnea
 - C. Hyperventilation
 - D. Acclimatization
4. The lobe of the cerebral cortex that is responsible for generating motor commands is:
 - A. Temporal
 - B. Parietal
 - C. Occipital
 - D. Frontal
5. Production of urine to modify plasma makeup is the result of:
 - A. Filtration
 - B. Absorption
 - C. Secretion
 - D. Filtration, absorption, and secretion
6. Exercise can trigger symptoms of Acute Mountain Sickness due to:
 - A. Low partial pressure of oxygen
 - B. Low atmospheric pressure
 - C. Abnormal neural signals
 - D. Small venous reserve of oxygen
7. Most secretion and absorption occurs in this part of the nephron
 - A. Proximal convoluted tubule
 - B. Descending loop of Henle
 - C. Ascending loop of Henle
 - D. Distal convoluted tubule
8. Which of the following cavities contains a component of the central nervous system:
 - A. Abdominal
 - B. Pelvic
 - C. Cranial
 - D. Thoracic
9. Gas moves from an area of _____ partial pressure to an area of _____ partial pressure.
 - A. Low; high
 - B. Low; low
 - C. High; high
 - D. High; low

10. The hormone that directly opposes the actions of natriuretic hormones is:
 - A. Rennin
 - B. Nitric oxide
 - C. Dopamine
 - D. Aldosterone
11. Which functional division of the nervous system would be responsible for the physiological changes seen during exercise (e.g., increased heart rate and sweating)?
 - A. Somatic
 - B. Autonomic
 - C. Enteric
 - D. Central
12. Ova and sperm are similar in terms of _____.
 - A. Size
 - B. Chromosome number
 - C. Flagella motility
 - D. Quantity produced per year
13. The exchange of the H⁺ for sodium in the kidney:
 - A. Rids the body of excess H⁺
 - B. Rids the body of excess sodium
 - C. Generate sodium bicarbonates
 - D. A and C only
14. Which cranial nerve does not control functions in the head and neck?
 - A. Olfactory
 - B. Trochlear
 - C. Glossopharyngeal
 - D. Vagus
15. The adrenal glands are attached superiorly to which organ?
 - A. Thyroid
 - B. Liver
 - C. Kidneys
 - D. Hypothalamus
16. When do fetal breathing movements begin?
 - A. Around week 20
 - B. Around week 37
 - C. Around week 16
 - D. After birth
17. The right kidney is slightly lower because:
 - A. It is displaced by the liver
 - B. It is displaced by the heart
 - C. It is slightly smaller
 - D. It needs protection of the lower ribs
18. The structure associated with the embryologic development of the peripheral nervous system is:
 - A. Neural crest
 - B. Neuraxis
 - C. Rhombencephalon
 - D. Neural tube

19. Which of the following is the most important buffer inside red blood cells?
- Plasma proteins
 - Hemoglobin
 - Phosphate buffers
 - Bicarbonate: carbonic acid buffer
20. Functional division of the nervous system that would be responsible for the physiological changes seen during exercise (e.g., increased heart rate and sweating) is:
- Enteric
 - Central
 - Somatic
 - Autonomic

Section B. Short Answer Questions (SAQs)

40 Marks

- Q1. Define the following **(2 Marks each)**
- Epiglottis
 - Acclimatization
 - Neurotransmitter
 - Bladder incontinence
 - Respiratory distress syndrome
- Q2. Differentiate between the following; **(4 Marks each)**
- Axon and dendrite
 - Male and female urethras
 - Oropharynx and Laryngopharynx
 - Proximal tubules and Distal tubes
 - Hyperpnoea and hyperventilation
- Q3. Describe three ways in which carbon dioxide can be transported. **(10 Marks)**

Section C. Long Answer Questions (LAQs)

(40 Marks)

- Q1. Discuss the main components of the of the urinary system **(20 marks)**
- Q2. Name and locate the main parts of the brain, and briefly describe the main functions of each. **(20 marks)**