

UNIVERSITY OF SWAZILAND
FACULTY OF HEALTH SCIENCES
GENERAL NURSING DEPARTMENT
FINAL EXAMINATION: MAY 2011

COURSE TITLE; HUMAN ANATOMY AND PHYSIOLOGY
COURSE CODE: HSC 111
TIME ALLOCATED: TWO (2) HOURS
MARKS ALLOCATED: 75

INSTRUCTIONS:

- 1. THERE ARE THREE QUESTIONS IN THIS PAPER.**
 - i) QUESTION 1 A. MULTIPLE CHOICE**
B. MATCHING
 - ii) QUESTION 2 & 3 ARE SHORT ANSWERS AND ESSAYS**

- 2. EACH QUESTION IS TO BE ANSWERED ON A SEPARATE PAGE.**

- 3. DO NOT OPEN QUESTION PAPER UNTIL PERMISSION HAS BEEN GRANTED BY INVIGILATOR.**

QUESTION I

MUTLIPLE CHOICE:

QUESTION 1 A

(20 MARKS)

Choose the most appropriate response.

1. Which neuroglia is responsible for the formation of myelin sheath?
 - A. Oligodendrocytes
 - B. Microglia
 - C. Astrocytes
 - D. Satellite cells

2. The functional structural unit of the nervous system is the.
 - A. Neuron
 - B. Efferent nerve fiber
 - C. Afferent nerve fiber
 - D. Interneuron

3. The longitudinal fissure separates the
 - A. Cerebrum from the cerebellum
 - B. Left and right hemispheres
 - C. Frontal and parietal lobe
 - D. Occipital and parietal lobe

4. The heart rate and the respiratory rate are controlled by the
 - A. Cerebellum
 - B. Cerebral hemisphere
 - C. Medulla oblongata
 - D. Midbrain

5. The crossover or decussating of pyramidal tracts occurs in the
 - A. Cerebellum
 - B. Medulla oblongata
 - C. Cortical grey matter
 - D. Pons

6. The physiology of the cerebral meninges is
 - A. Protection of joints
 - B. Protection of the brain and spinal cord
 - C. Protection and covering of peripheral nerves
 - D. None of the above

7. The most common nervous system homeostatic imbalance is
- A. CVA
 - B. Stroke
 - C. Cerebrovascular accident
 - D. All of the above
8. Cerebrospinal fluid for diagnostic purposes is drawn;
- A. Below L3
 - B. Below S1
 - C. Below T12 and L2
 - D. Between T12 and S2
9. Injury to the ventral horn of the spinal cord result in:
- A. Quadriplegia
 - B. Paraplegia
 - C. Flaccid paralysis
 - D. Spastic paralysis
10. Iodine deficiency result in :
- A. Weight loss
 - B. Goitre
 - C. Protruding eye balls
 - D. Diabetes.
11. The dominant sense in humans is:
- A. Taste
 - B. Vision
 - C. Smell
 - D. Hearing
12. The site for bitter receptors is:
- A. Tip of the tongue
 - B. The pharynx
 - C. The side of the tongue
 - D. Back of the tongue
13. The tube that links the middle ear to the pharynx is:
- A. Nasogastric tube
 - B. Pharyngotympanic tube
 - C. Olfactory tube
 - D. Vestibular tube

14. The normal intraocular pressure in the anterior chamber of the eye is:
- A. 20mmHg
 - B. 18 mmHg
 - C. 22 mmHg
 - D. 16 mmHg
15. Oxytocin hormone is secreted by
- A. Anterior pituitary
 - B. Adrenal cortex
 - C. The Hypothalamus
 - D. Thyroid gland
16. Plasma forms:
- A. 45% of whole blood
 - B. 42% of whole blood
 - C. 5% of whole blood
 - D. 55% of whole blood
17. The main function of erythrocytes is:
- A. Transport of Oxygen to tissues
 - B. Transport of nutrients to tissues
 - C. Thickens blood
 - D. Generates ATP
18. The following cells are mainly responsible for body's defence against bacteria, viruses, parasites and toxins
- A. WBC
 - B. RBC
 - C. Platelets
 - D. Monocytes
19. This part of the intrinsic conducting system sets the heart rate:
- A. The atrioventricular node
 - B. The sinoatrial node
 - C. The bundle of His
 - D. The purkinje fibres
20. Which of the following is not characteristic of the large intestine?
- A. Divided into ascending, transverse, and descending colons
 - B. Contains lots of bacteria
 - C. Main absorptive site
 - D. Absorbs a lot of water and salt

QUESTION 1 B

(5 MARKS)

MATCHING

Choose the correct response in column 2 corresponding to the statement in column 1.

Column 1

1. Responsible for vision
2. Responsible for hearing
3. Responsible for smell
4. Wonderer or vagabond
5. Controls the tongue

Column2

- a. Olfactory nerve
- b. Nerve number X
- c. Nerve number XII
- d. Vestibule cochlea nerve
- e. Optic nerve

QUESTION 2

(25 MARKS)

- A. With the aid of a diagram explain how neurons transfer information from stimuli to effector? (10)
- B. Briefly state what the D and E divisions represent in the autonomic nervous system. (10)
- C. State the process of urine formation (5)

QUESTION 3

(25 MARKS)

- A. Discuss six (6) functional activities of the digestive system. (12)
- B. Follow a drop of blood from the right atrium until it enters the aorta. (8)
- C. What is the richest source of the following nutrients? (5)
 - i. Minerals
 - ii. Vitamins
 - iii. Proteins
 - iv. Lipids
 - v. Carbohydrates