

FACULTY OF HEALTH SCIENCES

FINAL EXAMINATION

COURSE CODE: HSC 111

COURSE TITLE: HUMAN PHYSIOLOGY

TIME ALLOWED: 2 HOURS

INSTRUCTIONS:

- 1) ANSWER ALL THREE (3) QUESTIONS**
- 2) EACH QUESTION IS TO BE ANSWERED ON A SEPARATE SHEET OF PAPER**

QUESTION 1

MULTIPLE CHOICE QUESTIONS

1. Which statement does not best describe veins?

- a. They have less elastic tissue and smooth muscles than arteries
- b. They contain more fibrous tissue than arteries
- c. Most veins in the extremities have valves
- d. They always carry deoxygenated blood

2. The nutrient supply of lungs is supplied by the

- a. Pulmonary arteries
- b. Carotid arteries
- c. Pulmonary veins
- d. Bronchial arteries

3. Antibody functions include all but not:

- a. Clotting
- b. Complement fixation
- c. Antigen neutralization
- d. Agglutination

4. All the following are considered innate or non-specific body defenses except

- a. lymphocytes
- b. Phagocytosis
- c. Antibodies
- d. Lysozyme

5. Which of the following is not characteristic of the large intestines?

- 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

6. This ventricle is found in the diencephalon.

- A. Fourth Ventricle
- B. Left lateral Ventricle
- C. Right Lateral Ventricle
- D. Third Ventricle

7. Ventricles are filled with:-

- A. Arterial blood
- B. Plasma
- C. Cerebrospinal fluid
- D. Peritoneal fluid

8. The transverse cerebral fissure separates;-

- A. Lobes of the brain
- B. Cerebral hemisphere and cerebellum
- C. Right and left hemisphere
- D. Separate large regions of the brain.

9. Typing is controlled by this part of the brain.

- A. Motor area
- B. Promoter cortex
- C. Primary motor cortex
- D. Brocas area

10. Brocas area is responsible for:-

- A. Vision
- B. Typing
- C. Speech production
- D. Understanding written and spoken language.

11. Pyramidal crossing over occurs in the:-

- A. Cerebellum
- B. Pons
- C. Cerebral Hemisphere
- D. Medulla Oblongata

12. Delta brain waves indicate:-

- E. Brain Damage
- F. Mental Alertness
- G. Idling brain
- H. None of the above.

13. This is the dominant sense in humans.

- A. Taste
- B. Vision
- C. Smell
- D. Hearing.

14. Cerebrospinal fluid (CSF) is found in the:

- a. Sub-dural space
- b. Sub-arachnoid space
- c. Sub-pleural space
- d. Intra-peritoneal space

15. The choroids plexus in adults produce -----mls of cerebrospinal fluid a day.

- a. 150 mls
- b. 300 mls
- c. 500 mls
- d. 1000 mls

16. The most common nervous system disorder is:-

- a. Alzheimer's disease
- b. Parkinson's disease
- c. Huntington's disease
- d. Cerebrovascular accidents

17. Eye disorder resulting in distant objects being focused in front of retina,

- a. Glaucoma
- b. Cataract
- c. Myopia
- d. Hyperopia

18, Hyperopia is corrected using a:-

- A. Convex lens
- B. Concave lens
- C. Both of the above
- D. None of the above

19. Delicious is a:-

- A. Sweet taste
- B. Umami taste
- C, sour taste
- D. None of the above.

20. The most common endocrine disease amongst middle and older adults in Swaziland.

- A. Goiter
- B. Hypertension
- C. Diabetes Mellitus
- D. Graves disease

QUESTION 1: B

TRUE OR FALSE

1. Blood flow is fastest where the cross sectional area of the vascular bed is least. [T.F.]
2. Most nutrients are absorbed by active transportation [T.F.]
3. Hormones that increase BP by promoting vasoconstriction include atrial natri - uretic peptide [T.F.]
4. Lung compliance is determined largely by distensibility of tissue cells and recoil [T.F.]
5. Pulse pressure is systolic pressure **PLUS** pulse diastolic pressure [T.F.]

QUESTION 2

A. Briefly explain how baroreceptors and chemoreceptors influence blood pressure

[8 marks]

B. Discuss six (6) functional activities of the digestive system

[12 marks]

C. Briefly differentiate between humoral and cell mediated immunity.

[5marks]

[25 MARKS]

QUESTION 3

SHORT ANSWERS AND ESSAYS.

A. Describe in details how excitable neurons send their signal over long distances

[10 marks]

B. i) What is the main function of the autonomic nervous system?

ii) State four (4) functions of the hypothalamus.

[5 marks]

C. Using Physiology of sleep, describe NREM Sleep.

[5 marks]

D. State the Cerebral méninges and their functions

[5 marks]

[25 MARKS]