

FACULTY OF HEALTH SCIENCES

SUPPLEMENTARY EXAMINATION

JULY 2010

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. The structure of a capillary wall differs from that of a vein or an artery because**
 - a. It has two tunics instead of three
 - b. There is less smooth muscle
 - c. It has a single tunic – only the tunica intima
 - d. None of the above

- 2. Structural functions units of liver are:**
 - a. liver lobes
 - b. liver lobules
 - c. liver flanks
 - d. liver sinuses

- 3. The amount of oxygen bound to haemoglobin depends on:**
 - a. PO_2 ,
 - b. PCO_2
 - c. temperature
 - d. All of the above

- 4. The chief cells in the intestines secrete**
 - a. Gastric juice
 - b. Pepsinogen
 - c. Hydrochloric acid
 - d. Intrinsic factor

- 5. The sphincter between the stomach and duodenum is the;**
 - a. Pyloric sphincter
 - b. Cardiac sphincter
 - c. Hepatopancreatic
 - d. Ileocecal sphincter

- 6. Resistance of blood flow is directly associated with**
 - a. blood viscosity, vessel length and diameter
 - b. cardiac output, blood viscosity and diameter
 - c. blood viscosity, vessel length and mean arterial pressure
 - d. blood viscosity, cardiac output and stroke volume

7. It is generally believed that a diet

- a. Low in salt, saturated fats, and cholesterol helps prevent high blood pressure.
- b. Low salt, unsaturated fats, saturated fats, cholesterol helps prevent high blood pressure
- c. Low salt, unsaturated fats, cholesterol helps prevent high blood pressure
- d. All of the above

8. Lymphocytes all BUT NOT;

- a. Formed in bone marrow
- b. Mature into T or B lymphocytes
- c. Involved in graft rejection
- d. Protect body against parasitic worms

9. Large intestines are made up of all BUT NOT:

- a. Ascending colon
- b. Descending colon
- c. Sigmoid colon
- d. Horizontal colon

10. The paranasal sinuses are essential for;

- a. Moistens the incoming air
- b. Keeping the skull light
- c. Balancing pressure in the nasal cavity
- d. Fighting infections

11. The study of hormones and endocrine organs is:-

- a. Neurology
- b. Ophthalmology
- c. Endocrinology
- d. Dermatology

12. The tympanic cavity is :-

- a. Air filled cavity of the lungs
- b. Fluid filled cavity of the eye
- c. Fluid filled cavity of the heart
- d. Air filled cavity of the ear.

13. Blockage of the cerebro spinal fluid in newborns causes.

- a. Anencephaly
- b. Hydrocephaly
- c. Tumors
- d. None of the above.

14. The functional unit of the kidney is the:-
a. Neuron
b. Neuphron
c. Glomerulus
d. Bowman's capsule
15. Grand Mal epilepsy is signified by;-
a. Loss of consciousness
b. Incontinence of urine
c. Aura
d. All of the above

True or False

1. All organs of the Gastro – intestinal tract have the same basic pattern of tissue layers in their walls [T.F.]
2. Anatomical dead space is 350 ml air filled volume in the conducting passageways. [T.F.]
3. Bile aids digestion of fat [T.F.]
4. Saliva is produced by many small buccal glands [T.F.]
5. Blood type AB individuals are universal donors [T.F.]

MATCHING

COLUMN 1

- 1, Tinnitus
2. Meningitis
3. Ortitis media
4. Myopia
5. Hyperopia

COLUMN 2

- A. Inflammation of the middle ear
- B. Inflammation of the meanings
- C. Far-sightedness
- D. Ringing in the ears
- E. Near- sighted ness

[5 Marks]

QUESTION 2

A. Describe the functions E and the D division of the Autonomic Nervous system.

[10 marks]

B. State the sight of injury in the following homeostatic imbalances.

- i) Quadriplegia
- ii) Paraplegia
- iii) Hemiplegia
- iv) Meningitis
- v) Epilepsy

[5 Marks]

C. i) Using your understanding of physiology of sleep, explain why Humans need to sleep?

ii) State the functions of the following cranial nerves, I, V and X.

[5marks]

D. Physiologically describe vision of an emmetropic eye

[5 Marks]

QUESTION 3

A. Hemostasis is prevention of blood loss briefly explain three major phases of hemostasis.

[15 marks]

B. State three (3) functions of the nose

[3 marks]

C. Explain how oxygen is transported by the blood and what influences the amount of oxygen binding.

[2 marks]

C. Briefly discuss three (3) distribution functions and two (2) regulatory functions of the blood.

[5 marks]

[25 MARKS]