**KENYA MEDICAL TRAINING COLLEGE – NYAMIRA**

**SEPTEMBER 2013 KRCHN CLASS (PRE-SERVICE)**

**ANATOMY & PHYSIOLOGY CAT**

DATE: 16/12/2013 TIME: ...........................

**INSTRUCTIONS**

1. Enter your examination number and question number on each page used.
2. ALL questions are compulsory.
3. Omission of and or wrong numbering of a question or part of the question will result in 10% deduction of the marks scored from the relevant part.
4. Do NOT use a pencil.
5. Mobile phones are NOT allowed in the examination hall.

***PART ONE: MCQS (MULTIPLE CHOICE QUESTIONS) ANATOMY & PHYSIOLOGY– 17 MARKS***

Q.1. Anatomical term, which denotes the ear is:

1. Otic.
2. Calcaneal.
3. Hallux.
4. Buccal.

Q.2. The tissue fluid that bathes all the cells of the body except the outer layers of the skin is:

1. Plasma.
2. Intra cellular fluid.
3. Inter cellular fluid.
4. Extra cellular fluid.

Q.3. The neuroglia that have phagocytic function is:

1. Epindymal cell.
2. Atrocytes.
3. Microglia.
4. Oligodendrocytes.

Q.4. Which of the following terms do best describe “the study of how the body stems in order to maintain life “ is:

1. Homeostasis.
2. Feedback mechanism.
3. Anatomy.
4. Physiology.

Q.5. Agranulocytes type of leukocytes, include:

1. Monocytes, lymphocytes.
2. Monocytes, neutrophils.
3. Eusinophils, basophils.
4. Neutrophils, lymphocytes.

Q.6. The cell’s organelle, involved in the detoxification of some drugs is:

1. Atomic number.
2. Atomic weight.
3. Isotopes.
4. Electron configuration.

Q.7. Nerves communicate to each other through:

1. Connector.
2. Neuro transmitter.
3. Synaptic knobs.
4. Association neurone.

Q.8. Which of the following provides the site for lymphocytes formation?

1. Liver.
2. Lymphocyte system.
3. Bone marrow.
4. Plasma.

***PART ONE: MCQS (MULTIPLE CHOICE QUESTIONS) ANATOMY & PHYSIOLOGY– 17 MARKS***

Q.9. The organ found in the left hypochondriac region is known as:

1. Appendix.
2. Spleen.
3. Duodenum.
4. Caecum.

Q.10. The blood group which as a donor is compatible with blood group B and AB and is incompatible with blood group A and O is:

1. A.
2. O.
3. AB.
4. B.

Q.11. The primary source of erythropoietin is:

1. Kidney.
2. Liver.
3. Lung.
4. Bone marrow.

Q.12. The groups of cell bodies found within the brain is known as:

1. Basal ganglia.
2. Ganglia.
3. Nuclei.
4. Grey matter.

Q.13. A smooth connective tissue which surrounds and encloses a number of bundles of nerve fibres is known as:

1. Tracts.
2. Endoneurium.
3. Epineurium.
4. Perineurium.

Q.14. Diencephalon is part of the brain, which include:

1. Corpus callosum, pineal body, hypothalamus.
2. Pineal body, thalamus, hypothalamus.
3. Thalamus, corpus callosum, pineal body.
4. Hypothalamus, midbrain, corpus callosum.

Q.15. The situation whereby the red blood cells swell because the plasma is more dilute than the intracellular fluid cells and water move down its concentration gradient across their membrane into the red blood cells is referred as:

1. Isotonic.
2. Hypertonic.
3. Osmosis.
4. Hypotonic.

Q.16. The layer of the artery which consists of elastic tissue and smooth muscle is referred to as:

1. Tunica adventitia.
2. Tunica media.
3. Endothelium.
4. Tunica intimae.

***PART ONE: MCQS (MULTIPLE CHOICE QUESTIONS) ANATOMY & PHYSIOLOGY– 17 MARKS***

Q.17. Simple epithelium tissue include:

1. Squamous, cuboidal, columnar.
2. Columnar, transitional, stratified squamous.
3. Cuboidal, areolar, squamous.
4. Columnar, squamous, stratified squamous.

***PART TWO: SHORT ANSWER QUESTIONS – ANATOMY & PHYSIOLOGY – 40 MKS***

Q.1. Explain the following terms:

1. Osmosis.
2. Diffusion.
3. Facilitated diffusion.
4. Sodium-potassium pump. 8 marks

Q.2. Draw a well labelled diagram of the parts of the ear. 5 marks

Q.3. Explain how buffer system regulates the PH values of the blood. 5 marks

Q.4. Explain the process of fibrinolysis in haemostasis. 6 marks

Q.5. State three (3) main functions of lymph node. 3 marks

Q.6. Explain how the body temperature is controlled by negative feedback mechanisms

to maintain homeostasis. 10 marks

Q.7. State three (3) functions of the lacrimal apparatus. 3 marks

***PART THREE: LONG ANSWER QUESTIONS – ANATOMY & PHYSIOLOGY – 42 MKS***

Q.1. The nervous system consists of the brain, the spinal cord and peripheral nerves.

1. State three (3) functions of cerebrospinal fluid. 3 marks
2. Describe the flow of cerebrospinal fluid. 12 marks
3. Draw a well labelled diagram of the meninges covering the brain and spinal

cord. 5 marks

Q.2. The pumping action of the heart ensures constant circulation of the blood.

1. Draw a well labelled diagram of the heart showing direction of blood flow

through the heart. 5 marks

1. Describe the conducting system of the cardiac. 13 marks
2. State four (4) factors affecting cardiac output. 4 marks