**KENYA MEDICAL TRAINING COLLEGE – NYAMIRA**

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

**ANATOMY & PHYSIOLOGY CAT**

DATE: …………………….. TIME: 2 HOURS 47 MINUTES

**INSTRUCTIONS**

1. Enter your examination number and question number on each page used.
2. ALL questions are compulsory.
3. The paper consists of Part I (MCQ), Part II (Short Answer Questions) and Part III (Long Answer Questions).
4. Omission of or wrong numbering of a question or part of the question will result in 10% deduction of the marks scored from the relevant part.
5. Do NOT use a pencil.
6. Mobile phones are NOT allowed in the examination hall.

**PART ONE: MCQS (MULTIPLE CHOICE QUESTIONS) A & P– 10 MARKS**

Q.1. The elements are different from one another due to:

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

Q.2. Groups of lipids include:-

1. Phospholipids, cholesterol, prostaglandins, triglycerides.
2. Triglycerides, prostaglandins, glycogen, enzymes.
3. Prostaglandins, phospholipids, enzymes, cholesterol.
4. Glycogen, prostaglandins, enzymes, phospholipids.

Q.3. The cells organelle which is involved in the detoxification of some drugs is known as:-

1. Mitochondria.
2. Lysosomes.
3. Golgi apparatus.
4. Endoplasmic reticulum.

Q.4. The anatomical term referring to a navel is known as:-

1. Hallux.
2. Crural.
3. Umbilical.
4. Antecubital.

Q.5. The organ found in the left hypochondriac region is known as:-

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

Q.6. The blood group which as a donor is compatible with blood group B and AB and incompatible with blood group A and O is known as:-

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

Q.7. Agranulocytes type of leukocytes include:-

1. Neutrophils, lymphocytes.
2. Eosinoplils, basophils.
3. Monocytes, neutrophils.
4. Lymphocytes, monocytes.

**PART ONE: MCQS (MULTIPLE CHOICE QUESTIONS) A & P– 10 MARKS**

Q.8. The unpaired branches of the abdominal aorta include:-

1. Splenic artery, renal arteries, hepatic artery.
2. Inferior phrenic arteries, testicular arteries, ovarian arteries.
3. Hepatic artery, spleenic artery, left gastric artery.
4. Left gastric artery, testicular arteries, inferior phrenic artery.

Q.9. The type of neuroglia that is associated with the secretion of cerebrospinal fluid is known as:-

1. Ependymal cells.
2. Oligodendrocytes.
3. Microglia.
4. Astrocytes.

Q.10. Sacral plexus include:-

1. Phrenic nerve, deep branches, circumflex nerve.
2. Median nerve, axillary nerve, radial nerve.
3. Pudendal nerve, obturator nerve, ulnar nerve.
4. Sciatic nerve, pudendal nerve, common perontal nerve.

**PART TWO: SHORT ANSWER QUESTIONS - A & P – 34 ½ MARKS**

Q.1. Outline f our (4) functions of the spleen. 4 marks

Q.2. Explain how the blood pressure is controlled. 10 marks

Q.3. State four (4) functions of a simple epithelium cell. 4 marks

Q.4. Explain the following terms:

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

Q.5. Draw a well labelled diagram of the simple cell. 5 marks

Q.6. List the seven (7) main parts of the brain. 3½ marks

**PART THREE: LONG ANSWER QUESTIONS – A & P – 39 MARKS**

Q.1. The ear is an organ of hearing and is also involved in balance.

1. Draw a well labelled diagram showing parts of the ear. 5 marks
2. Describe the physiology of hearing. 12 marks

Q.2. The heart possesses the property of autorymicity.

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

the heart. 5 marks

1. Describe the electrical conducting system of the heart. 13 marks
2. List eight (8) factors that determine the heart rate. 4 marks