**KENYA MEDICAL TRAINING COLLEGE – NYAMIRA**

**RE-SIT END OF INTRODUCTORY BLOCK EXAMINATION**

**MARCH 2012 KRCHN CLASS (PRE-SERVICE)**

**ANATOMY AND PHYSIOLOGY EXAMINATION**

DATE: 16/11/2012 TIME:………………………………..

**INSTRUCTIONS**

1. Enter your examination number and question number on each page used.
2. ALL questions are compulsory.
3. For part 1 (MCQs), write the answer in the spaces provided on the answer booklet.
4. For Part 2 (SHORT ANSWER QUESTIONS), answer the questions following each other.
5. For Part 3 (LONG ANSWER QUESTIONS), answer to each question MUST start on a separate page.
6. 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.
7. Do NOT use a pencil.
8. Mobile phones are NOT allowed in the examination hall.

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

Q.1. Most of the body’s homeostatic control mechanism which adjust with changes occurring to the body use is:-

1. Negative feedback mechanism.
2. Positive feedback mechanism.
3. Osmosis.
4. Cascade or cemplifler system.

Q.2. Nerves communicate to each other through a connection of ?

1. Messenger
2. Neurotransmitter.
3. Motor neurons.
4. Motor neurons.

Q.3. The major function of connective tissue is:-

1. Form glands.
2. Line body surface.
3. Support body surface.
4. Nerve conduction.

Q.4. Average normal 24 hour urine output is approximately:-

1. 1500mls.
2. 2000mls.
3. 2500mls.
4. 1800mls.

Q.5. The maximum volume of air which can be moved into and out of the lungs is:-

1. Tidal volume.
2. Vital capacity.
3. Residual volume.
4. Inspiratory reserve volume.

Q.6. Which muscles covers the shoulder and the neck?

1. Vesuvius.
2. Trapezium.
3. Masseter.
4. Pectoralis major.

Q.7. Turning the sole of the foot outwards:-

1. Flexion.
2. Extension.
3. Abduction.
4. Turning the sole of the foot outwards.

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

Q.8. The part of the anterior aspect of the upper arm deep to the biceps is:-

1. Brachialis.
2. Triceps.
3. Flexor carpi radius.
4. Palmaris lungus.

Q.9. The amount of blood ejected from each ventricle every minute is:-

1. Cardiac output.
2. Stroke volume.
3. Blood volume.
4. Blood pressure.

Q.10. Vestibule and semi-circular canals are involved in:-

1. Hearing.
2. Balancing.
3. Vision.
4. Speech.

Q.11. The nerves which communicate from the external environment to the internal fluid environment:-

1. Somato-sensory impulses.
2. Motor impulses.
3. Peripheral nerves.
4. Neurons.

Q.12. The normal cardiac cycle is:-

1. 0.08 seconds.
2. 8 seconds.
3. 0.8 seconds.
4. None of the above.

Q.13. Which cells secrete glucagon?

1. Acurias cells.
2. Beta cells.
3. Alpha cells.
4. Goblet cells.

Q.14. The functional unit of the kidney is:-

1. Glomerulus.
2. Bowman’s capsule.
3. Juxtaglomerular apparatus.
4. Motor neurons.

Q.15. Nerves communicate with each other through a connection of:-

1. Connector.
2. Messengers.
3. Neurotransmitter.
4. Motor neurons.

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

Q.16. Which of the following mechanisms is not responsible for the control of respiration:-

1. High level of carbon dioxide.
2. The respiratory center.
3. Chemoreceptors.
4. Exercise and respiration.

Q.17. Which of the following provides the site for lymphocyte formation:-

1. Spleen.
2. Bone marrow.
3. The lymphatic system.
4. The liver.

Q.18. Which of the following is not necessary for red blood cell production:-

1. Vitamin K.
2. Folate.
3. Iron.
4. Vitamin B12.

Q.19. The main functions of bile salts are:-

1. Albumin synthesis.
2. Lipid manufacture for protein transport.
3. Emulsification of fats.
4. Urea synthesis from ammonia.

Q.20. The cardiac conduction system includes all of the following exchange:-

1. The SA node.
2. The AV node.
3. The bundle branches.
4. The chordae tendineal.

**PART TWO: SHORT ANSWER QUESTIONS – A & P – 40 MARKS**

Q.1. Define metabolism. 2 marks

Q.2. With the aid of a diagram, draw a human cell indicating all the organelles. 6 marks

Q.3. List the six (6) cranium bones. 3 marks

Q.4. List the three (3) types of joints. 3 marks

Q.5. Explain the two (2) muscles of breathing. 4 marks

Q.6. Explain the functions of the three (3) types of plasma proteins. 6 marks

Q.7. Explain the three (3) main types of activity associated with the cerebral cortex. 6 marks

Q.8. Explain the six (6) functions of insulin. 6 marks

**PART THREE: LONG ANSWER QUESTIONS – A & P – 40 MARKS**

Q.1. (a) Draw a well labelled diagram of the human heart. 10marks

(b) Explain the four (4) factors affecting stroke volume. 8 marks

(c) List four (4) pulse points. 2 marks

Q.2. (a) Describe the flow of cerebrospinal fluid. 10marks

(b) Explain five (5) types of neuroglia. 5 marks

(c) Draw the structure of the neuron. 5 marks