KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

END OF COURSE EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (M.B.; CH.B)

HMP 200: MEDICAL PHYSIOLOGY; PAPER 1: ESSAYS

DATE: Wednesday 20th July 2011 **TIME:** 9.00a.m – 12.00p.m

INSTRUCTIONS
Paper1: Essays

Sec A: Short answer questions (SAQ)

Instructions: write your answers in the spaces provided

Each question =5 marks

1) Outline the elements of biological controls systems

2) What are the determinants of epithelial transport

3) Enumerate the functions of blood testis barrier

4) What is the physiological significance of Atrio-ventricular (A-V) delay?

5) Complete the following table

	Tidal vol (ml)	Resp rate(/min)	Dead space (ml)	Pulmonary ventilation (L/min)	Alveolar ventilation (L/min)
a	600	10	150	------	--------
b	400	15	150	-------	----------
c	300	20	150	-------	---------
d	200	30	150	-------	----------
e	150	40	150	----------	----------

6) Briefly explain why transfused blood is not as efficient at oxygen delivery as the recipient's own blood

7) What are the physiological problems at a depth of 100 meters under the sea?

8) List the physiological agents affecting parietal cell functions
   a) Stimulants

b) Inhibitors

9) With the aid of an annonatated diagram, describe the pressure-volume relationship in the urinary bladder

10) Why is the cerebro -spinal fluid chloride higher than plasma?

11) How does cortisol affect arterial blood pressure?

12) Explain phantom pain

Sec B: Long answer questions (LAQ)

Each question=10 marks

Write your answers in the separate booklets provided

(1) Give an account of classical pyramidal tract syndrome

(2) Elaborate on the functions of the hypothalamus

(3) Elaborate on the following:

(a) Factors affecting GFR

(b) Substances used to measure GFR in humans

(4) Describe the manifestations, in light of normal functions of Growth hormone (a) dwarfism (b) gigantism

(5) (a) Define and classify shock

(a) Describe the stages of haemorrhagic shock

6. Describe ionic basis of photoreceptor