

## SECOND EXAMINATION FOR MEDICAL DEGREES

## PHYSIOLOGY II

DECEMBER 2006

TIME: THREE HOURS

*Answer all five questions**Answer part A and B in separate answer books*

## Part A

- 1.0 A 31 year-old woman in her 4<sup>th</sup> pregnancy complained of difficulty in breathing in the 3<sup>rd</sup> trimester. On examination, she was pale and had tachycardia.
- 1.1 Explain the physiological basis for
- 1.1.1 difficulty in breathing. (20 marks)
  - 1.1.2 paleness. (20 marks)
  - 1.1.3 tachycardia. (20 marks)
- 1.2 Describe physiological changes in blood during normal pregnancy. (40 marks)
- 2.0 Give physiological explanations for the following.
- 2.1 Increased pulse rate in haemorrhagic shock. (40 marks)
  - 2.2 Low pulse rate in complete heart block. (20 marks)
  - 2.3 Occurrence of hypertension in renal artery stenosis. (40 marks)
- 3.0 Describe the role of the following in the regulation of respiration.
- 3.1 Medullary respiratory centre. (25 marks)
  - 3.2 Stretch receptors in the lung. (25 marks)
  - 3.3 Peripheral chemoreceptors. (50 marks)

## Part B

- 4.0 Explain the following.
- 4.1 Nephrogenic diabetes insipidus does not respond to desmopressin. (20 marks)
  - 4.2 Hypernatraemia in Cushing syndrome. (40 marks)
  - 4.3 Anaemia in chronic renal failure is treated with erythropoietin. (40 marks)
5. Write short notes on
- 5.1 the effects of severe vomiting. (25 marks)
  - 5.2 the regulation of gastric secretion. (25 marks)
  - 5.3 the loop of Henle. (25 marks)
  - 5.4 deafness. (25 marks)