



## SECOND EXAMINATION FOR MEDICAL DEGREE

## PHYSIOLOGY II

8

MARCH 2003

TIME: THREE HOURS

*Answer all five questions*

*Answer part A & B in separate answer books*

## PART A

1. Give physiological explanations to the following:
  - 1.1 Some patients with ventricular septal defect develop central cyanosis. 40 marks
  - 1.2 Blood pressure may be maintained in the normal range in a patient with hypovolaemic shock. 30 marks
  - 1.3 A pulse rate of 40/min is found in a patient with complete heart block. 30 marks
  
2. Explain why
  - 2.1 intrapleural pressure is more negative in the apices of lungs than in the bases. 35 marks
  - 2.2 bases of lungs are better ventilated than apices. 35 marks
  - 2.3 PEFV is low in patients with obstructive airway disease. 30 marks
  
3.
  - 3.1 List five conditions where  $H^+$  concentration in the blood is disturbed. 20 marks
  - 3.2 Describe the role played by the following in  $H^+$  homeostasis.
    - 3.2.1 respiratory system 35 marks
    - 3.2.2 kidney 45 marks

## PART B

4. Describe briefly
  - 4.1 lower oesophageal sphincter dysfunction. 50 marks
  - 4.2 the neural and muscular mechanisms relating to the vomiting reflex. 50 marks
  
- 5.0 Write short notes on
  - 5.1 Effect of aldosterone on  $Na^+$  homeostasis. 25 marks
  - 5.2 Maintenance of muscle tone. 25 marks
  - 5.3 Referred pain. 25 marks
  - 5.4 Short stature. 25 marks