



Second Examination for Medical Degrees
PHYSIOLOGY - Paper II

02nd July 2015

Time: Three hours

Answer all five (05) questions. Use a separate book for each question.

1.0

- 1.1 Describe physiological mechanisms activated in mild exercise which will increase blood supply to a muscle tissue. (40 Marks)
- 1.2 A patient is detected to have autonomic neuropathy and his baroreceptor nerve function is impaired considerably. Compare the changes that would occur in the cardiovascular system of this patient during mild exercise with those of a normal person. (40 Marks)
- 1.3 An anaemic patient can develop ischemic chest pain easily compared to normal person. Explain the reason briefly. (20 Marks)

2.0

- 2.1 What is central cyanosis? (10 Marks)
- 2.2 Explain different conditions which can cause central cyanosis. (20 Marks)
- 2.3 Describe the role of chemoreceptors in the regulation of respiration. (40 Marks)
- 2.4 Describe the role of non-chemical influences on regulation of respiration. (30 Marks)

3.0

- 3.1 Describe five different functions of intestinal bacteria in a healthy individual. (50 Marks)
- 3.2 Briefly describe the various mechanisms which can cause maldigestion and malabsorption of food. (50 Marks)

4.0 Name hormones (two each) and describe their role in the regulation of

- 4.1 blood pressure. (25 Marks)
- 4.2 blood glucose level. (25 Marks)
- 4.3 blood Ca^{+2} level. (25 Marks)
- 4.4 lactation. (25 Marks)

5.0 Give physiological explanations for the following

- 5.1 Patients with bone marrow suppression are susceptible for infections. (30 marks)
- 5.2 Disturbances in micturition is a feature of spinal cord damage. (40 marks)
- 5.3 A girl who attained menarche around six years of age has been investigated to exclude the possibility of a brain tumour. (30 marks)