

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FIRST EXAMINATION FOR MEDICAL DEGREES –November 2015**  
**Physiology: Paper II**

Date: 06.11.2015

Time: 03 hours

ANSWER ALL THE TEN QUESTIONS

1. Describe the following:
  - 1.1. Regulation of the osmolality of the plasma (50 Marks)
  - 1.2. Oedema in lymphatic obstruction (50 Marks)
  
2. Explain the physiological basis of the following:
  - 2.1. Finding megaloblasts in bone marrow of patients with B<sub>12</sub> deficiency (30 Marks)
  - 2.2. Anaemia in woman with increased menstrual flow (35 Marks)
  - 2.3. Bronchial asthma caused by exposure to dust in some people (35 Marks)
  
3. Explain the physiological basis of the following:
  - 3.1. Dyspnea in pulmonary oedema (40 Marks)
  - 3.2. Hypoxia in obstruction of right bronchus (30 Marks)
  - 3.3. Faintish feeling on hyperventilation (30 Marks)
  
4. Write notes on the following:
  - 4.1. ECG (40 Marks)
  - 4.2. Arterial pulsation (30 Marks)
  - 4.3. Coronary blood flow (30 Marks)
  
5. Explain the Physiological basis of the following:
  - 5.1. Increased pigmentation in Cushing Syndrome (25 Marks)
  - 5.2. Cutaneous vasodilatation in thyrotoxicosis (25 Marks)
  - 5.3. Gigantism in excess secretion of growth hormone (25 Marks)
  - 5.4. Wasting of muscles in treatment with high doses of prednisolone (25 Marks)
  
6. Describe the following:
  - 6.1. Deglutition (50 Marks)
  - 6.2. Regulation of acid secretion in stomach (50 Marks)
  
7. Explain the physiological basis of the following:
  - 7.1. Reduction of urine formation in haemorrhage (35 Marks)
  - 7.2. Diuresis on injection of furosemide (30 Marks)
  - 7.3. Uncontrolled urination in panic (extreme fear) situation (35 Marks)
  
8. Describe the following:
  - 8.1. Ovulation (50 Marks)
  - 8.2. Spermatogenesis (50 Marks)

9. Explain the physiological basis of the following:
- 9.1. People with lesion in dorsal column can stand straight with eyes opened but they loose balance when they close their eyes. (30 Marks)
  - 9.2. Persons with lesions in extrapyramidal system may have exaggerated tendon reflexes. (40 Marks)
  - 9.3. In patients with transection of the spinal cord in mid thoracic segment, legs are warmer than hands. (30 Marks)
10. Describe the following:
- 10.1. Presbyopia (25 Marks)
  - 10.2. Light reflex (25 Marks)
  - 10.3. Transmission of sound from air to fluid in internal ear (25 Marks)
  - 10.4. Perception of taste (25 Marks)