

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FIRST EXAMINATION FOR MEDICAL DEGREES –August- 2018**  
**Physiology: Paper II**

Date: 29.08.2018

Time: 03 hours

ANSWER ALL THE TEN QUESTIONS

1. Explain the physiological basis of the following:
  - 1.1. Patients with liver failure will have swelling of both legs (35 Marks)
  - 1.2. Varicose veins in the right leg causes swelling of the right leg (30 Marks)
  - 1.3. Patients who had malignancy and right axillary lymph nodes are removed as part of surgery develop swelling of the right upper limb (35 Marks)
  
2. Explain the physiological basis of the following:
  - 2.1. Analysis of blood is helpful in identifying B<sub>12</sub> deficiency (50 Marks)
  - 2.2. Reticulocyte count is used to evaluate the response to treatment of anaemia (50 Marks)
  
3. Explain:
  - 3.1. Development of pneumothorax in chest injuries (50 Marks)
  - 3.2. Development of cyanosis in severe lung infection (50 Marks)
  
4. Describe:
  - 4.1. Normal ECG and correlate it with normal cardiac events (50 Marks)
  - 4.2. Regulation of blood pressure (50 Marks)
  
5. Explain the physiological basis of the following:
  - 5.1. Patients with hypothyroidism may have high TSH levels (35 Marks)
  - 5.2. Patients with diabetes mellitus are always hungry (30 Marks)
  - 5.3. Wound healing is poor in patients with excess glucocorticoids (35 Marks)
  
6. Describe:
  - 6.1. Gastric emptying (50 Marks)
  - 6.2. Absorption of fat in intestine (50 Marks)
  
7. Write notes on:
  - 7.1. Functions of the kidney (50 Marks)
  - 7.2. Adipose tissue (50 Marks)
  
8. Describe:
  - 8.1. Pubertal changes in females (50 Marks)
  - 8.2. Weight gain in pregnancy (25 Marks)
  - 8.3. Ejaculation of semen (25 Marks)

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9. Describe the transmission of impulses to the cortex from the following receptors:
- 9.1. Fine touch in right index finger (30 Marks)
  - 9.2. Taste buds in the left side of the tongue (30 Marks)
  - 9.3. Nasal half of right retina (40 Marks)
10. Write notes on:
- 10.1. Sleep (50 Marks)
  - 10.2. Functions of Hypothalamus (50 Marks)