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UNIVERSITY OF JAFFNA, SRI LANKA  
UNIT OF ALLIED HEALTH SCIENCES  
First Year First Semester Basic Sciences Examination– August 2017  
AHSBPH 1154 – Basic Physiology I  
Paper II

Date: 27.09.2017.

Time: 2 hours

**Answer all the six questions.**

1. Describe the following:
  - 1.1. Formation and reabsorption of tissue fluid (50 Marks)
  - 1.2. Regulation of osmotic pressure of the plasma (25 Marks)
  - 1.3. Physiological basis of oedema in liver failure (25 Marks)
  
2. Describe the following:
  - 2.1. Regulation of red cell production (40 Marks)
  - 2.2. Changes observed in red cells of a person with iron deficiency anaemia (30 Marks)
  - 2.3. Changes observed in red cells of a person with Vitamin B<sub>12</sub> deficiency anaemia (30 Marks)
  
3. Describe the physiological basis of the following:
  - 3.1. Bleeding stops after finger puncture (30 Marks)
  - 3.2. Patients with liver disease have increased risk of severe bleeding (30 Marks)
  - 3.3. Pus contains dead and dying neutrophils (40 Marks)
  
4. Describe the physiological basis of the following:
  - 4.1. Hearing ability reduces when synovial joints in the middle ear become stiff (35 Marks)
  - 4.2. Strong odorants (smell substances) have high lipid solubility as well as water solubility (35 Marks)
  - 4.3. Colour vision requires bright light (30 Marks)
  
5. Explain the importance of the size of the following:
  - 5.1. Receptive field (30 Marks)
  - 5.2. Motor unit (30 Marks)
  - 5.3. Pre-frontal cortex (40 Marks)
  
6. Describe the actions of the following hormones:
  - 6.1. Thyroxin (50 Marks)
  - 6.2. Insulin (50 Marks)