



UNIVERSITY OF JAFFNA, SRI LANKA
FIRST EXAMINATION FOR MEDICAL DEGREES 2 -August - 2019

Physiology: Paper II

Date: 24.08.2019

Time: 03 hours

ANSWER ALL THE TEN QUESTIONS

1. Describe the role of following organs in maintaining production / destruction of red cells:
 - 1.1. Kidney (25 Marks)
 - 1.2. Stomach (45 Marks)
 - 1.3. Spleen (30 Marks)

2. Describe the following:
 - 2.1. Diffusion of oxygen in alveoli (40 Marks)
 - 2.2. Transport of carbon dioxide (40 Marks)
 - 2.3. Change in blood pH during hyperventilation (20 Marks)

3. Describe the effects of stimulation of the following efferent nerves supplying the heart:
 - 3.1. Left vagus nerve (25 Marks)
 - 3.2. Right vagus nerve (25 Marks)
 - 3.3. Sympathetic nerves (50 Marks)

4. Describe the physiological basis of the following:
 - 4.1. Cardiac output increases in people with transplanted heart (without innervation to the heart) during physical exercise. (50 Marks)
 - 4.2. QRS complex is prolonged in ECG of patients with bundle branch block (50 Marks)

5. Describe the physiological basis of the following:
 - 5.1. Blood pressure is reduced in deficiency of aldosterone (30 Marks)
 - 5.2. Secretion of breast milk increases when baby is put to breast (30 Marks)
 - 5.3. Excess secretion of growth hormone leads to diabetes mellitus (40 Marks)

6. Describe the following:
 - 6.1. Swallowing (50 Marks)
 - 6.2. Defecation (50 Marks)

7. Explain:
 - 7.1. Glomerular filtration and the factors affecting it (50 Marks)
 - 7.2. Concentrating the urine (50 Marks)

8. Describe:
- 8.1. The changes occurring in a male during puberty (50 Marks)
 - 8.2. Amenorrhea of pregnancy (25 Marks)
 - 8.3. The weight gain during pregnancy (25 Marks)
9. Describe briefly:
- 9.1. Two-point discrimination (25 Marks)
 - 9.2. Withdrawal reflex (25 Marks)
 - 9.3. Knee jerk (25 Marks)
 - 9.4. Sleep-apnoea (25 Marks)
10. Describe briefly:
- 10.1. Myopia and its correction (30 Marks)
 - 10.2. Basis of colour vision (40 Marks)
 - 10.3. Function of semicircular canals (30 Marks)