

UNIVERSITY OF JAFFNA, SRI LANKA
FIRST EXAMINATION FOR MEDICAL DEGREES 2 –January- 2020
Physiology: Paper II



Date: 22.01.2020

Time: 03 hours

ANSWER ALL THE TEN QUESTIONS

1. Describe the role of red cells in the following functions:
 - 1.1. Transport of oxygen (50 Marks)
 - 1.2. Transport of carbon dioxide (50 Marks)

2. Describe the physiological basis of the following:
 - 2.1. Lungs collapse in pneumothorax (30 Marks)
 - 2.2. No tissue fluid formation in pulmonary capillaries (40 Marks)
 - 2.3. Hyperventilation causes vertigo (30 Marks)

3. Describe the physiological basis of the following:
 - 3.1. Emotional shock can result in cardiac arrest (30 Marks)
 - 3.2. Injection of adrenalin results in increased cardiac output (40 Marks)
 - 3.3. Patients with damaged AV node have bradycardia (30 Marks)

4. Write notes on:
 - 4.1. Blood pressure (50 Marks)
 - 4.2. Coronary circulation (50 Marks)

5. Describe the physiological basis of the following:
 - 5.1. Increased sweating in patients with hyperthyroidism (25 Marks)
 - 5.2. Increased hunger in patients with insulin resistance (25 Marks)
 - 5.3. High risk of fracture of bones in patients with hyperparathyroidism (25 Marks)
 - 5.4. Wasting of muscles in patients treated with high dose of prednisolone (25 Marks)

6. Describe the physiological basis of the following:
 - 6.1. Dehydration causes bad smell from the mouth (40 Marks)
 - 6.2. Fatty food delays gastric emptying (30 Marks)
 - 6.3. Low fiber diet causes constipation (30 Marks)

7. Describe:
 - 7.1. The effect of increased angiotensin II on glomerular filtration (50 Marks)
 - 7.2. The effect of reduced ADH on urine production (50 Marks)

8. Describe the physiological basis of the following:
 - 8.1. Emotional upset can cause impotence (30 Marks)
 - 8.2. If a male child starts secreting large amounts of adrenal androgen, the testicles do not develop as in normal puberty (40 Marks)
 - 8.3. Fluid retention in pregnancy (30 Marks)

9. Describe briefly:
- 9.1. Receptive field
 - 9.2. Motor unit
 - 9.3. Inverse stretch reflex
 - 9.4. Micro sleep



(25 Marks)

(25 Marks)

(25 Marks)

(25 Marks)

10. Describe briefly:
- 10.1. Blind spot
 - 10.2. Binocular vision
 - 10.3. Visual acuity

(30 Marks)

(30 Marks)

(40 Marks)