



UNIVERSITY OF JAFFNA, SRI LANKA  
FIRST EXAMINATION FOR MEDICAL DEGREES - NOVEMBER - 2020

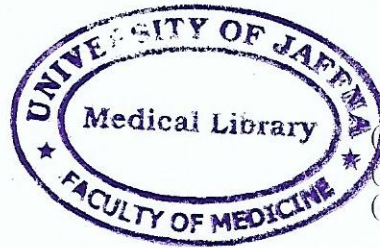
**Physiology: Paper II**

Date: 25.11.2020

Time: 03 hours

ANSWER ALL THE TEN QUESTIONS

1. Describe:
  - 1.1. Tissue fluid formation and reabsorption (40 Marks)
  - 1.2. Oedema formation in right heart failure (30 Marks)
  - 1.3. Oedema formation in lymphatic block in left inguinal region (30 Marks)
  
2. Write notes on:
  - 2.1. Anaemia (50 Marks)
  - 2.2. Blood groups (50 Marks)
  
3. Describe:
  - 3.1. Chemical control of respiration (50 Marks)
  - 3.2. The change in respiration in diabetic ketosis (25 Marks)
  - 3.3. The effect of open pneumothorax in respiration (25 Marks)
  
4. Describe:
  - 4.1. The spread of impulse in the heart (50 Marks)
  - 4.2. The change in ECG when AV node is completely non-functional (25 Marks)
  - 4.3. Change in ECG in left ventricular hypertrophy (25 Marks)
  
5. Explain the physiological basis of the following:
  - 5.1. Cardiac output decreases when heart rate goes above 200 / minute (25 Marks)
  - 5.2. During physical exercise, motor cortex gets more blood supply (25 Marks)
  - 5.3. Skin blood flow increases during heavy physical exercise (25 Marks)
  - 5.4. In the fetus, upper body is well developed when compared to lower part of the body (25 Marks)
  
6. Explain the physiological basis of the following:
  - 6.1. Serum potassium is increased in diabetic coma (25 Marks)
  - 6.2. Thyroid gland enlarges in iodine deficiency (25 Marks)
  - 6.3. Face appears more reddish in Cushing's disease (25 Marks)
  - 6.4. In adrenogenital syndrome, secondary sexual characteristics develop but the testicles remain at infantile state (25 Marks)
  
7. Describe:
  - 7.1. Vomiting (50 Marks)
  - 7.2. Defecation (50 Marks)



8. Describe:
- 8.1. Glomerular filtration (30 Marks)
  - 8.2. Excretion of acid in renal tubule (30 Marks)
  - 8.3. Concentrating urine (40 Marks)
9. Explain the physiological basis of the following:
- 9.1. In menstrual cycle, duration of proliferative phase is variable but secretary phase is constant (40 Marks)
  - 9.2. Fertilization leads to arrest of menstruation (30 Marks)
  - 9.3. Semen clots on ejaculation (30 Marks)
10. Describe:
- 10.1. Receptive field in skin (25 Marks)
  - 10.2. Motor unit (25 Marks)
  - 10.3. Sleep apnoea (25 Marks)
  - 10.4. Fovea Centralis in eye (25 Marks)