

**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FIRST EXAMINATION FOR MEDICAL DEGREES –May 2019**  
**Physiology: Paper II**

Date: 23.05.2019

Time: 03 hours

ANSWER ALL THE TEN QUESTIONS

1. Describe the physiological basis of the following:
  - 1.1. Patients with Liver cirrhosis are at risk of severe haemorrhage (50 Marks)
  - 1.2. Patients, whose terminal half of small intestine is removed for some surgical complication, are at risk of developing anaemia. (50 Marks)
  
2. Describe:
  - 2.1. The role of pleural fluid in respiration (25 Marks)
  - 2.2. The role of surfactant in respiration (25 Marks)
  - 2.3. Transport of oxygen in blood (50 Marks)
  
3. Describe briefly the effects of the following drugs on the heart:
  - 3.1. Beta blockers (35 Marks)
  - 3.2. Nicotinic receptor blockers (30 Marks)
  - 3.3. Calcium channel blockers (35 Marks)
  
4. Describe the physiological basis of the following:
  - 4.1. Old people are likely to faint if they get up from bed in a hurry (30 Marks)
  - 4.2. Victims of road traffic accident are likely to bleed more on hot days than on cool days (30 Marks)
  - 4.3. Cardiac output is increased in thyrotoxicosis (40 Marks)
  
5. Describe the actions of:
  - 5.1. Insulin (50 Marks)
  - 5.2. Cortisol (50 Marks)
  
6. Describe:
  - 6.1. Gastric emptying (30 Marks)
  - 6.2. Control of pancreatic secretion (40 Marks)
  - 6.3. Glucose absorption in intestine (30 Marks)
  
7. Describe:
  - 7.1. Glomerular filtration (30 Marks)
  - 7.2. The effect of severe haemorrhage on glomerular filtration (40 Marks)
  - 7.3. Risk of intra vascular haemolysis to renal function (30 Marks)

8. Describe the physiological basis of the following:
  - 8.1. Semen clots on ejaculation (25 Marks)
  - 8.2. Vasectomy does not affect ejaculation (25 Marks)
  - 8.3. Progesterone tablets inhibit ovulation (25 Marks)
  - 8.4. The baby stimulates ejection of milk (25 Marks)
  
9. Describe the physiological basis of the following:
  - 9.1. Patients with appendicitis complain of pain around umbilicus (30 Marks)
  - 9.2. Patients with lesion in Wernicke's area have difficulty in talking (30 Marks)
  - 9.3. Adequate sleep is important for growth of children (40 Marks)
  
10. Describe:
  - 10.1. Visual acuity (50 Marks)
  - 10.2. Perception of sound in internal ear (50 Marks)