ÖREBRO UNIVERSITET
HÄLSOAKADEMIN
ENHETEN FÖR KLINISK MEDICIN

Medicine, Patophysiology at Cellular Level, Second Level, 15 higher education credits, MC2005

Examination, Physiology, 10 higher education credits. (Code: 0101)
An individual written examination

Examination time 240 minutes

Course coordinator: Igor Oliynyk

Lecturers: Elisabeth Hultgren-Hörnquist (4 p)
Igor Oliynyk (46 p)
Godfried Roomans (12 p)
Ravi Vumma (10p)
Ignacio Rangel (8 p)

Instructions:

- Write your code number on each paper you submit
- Each lecturer will mark their own part of the examination. Therefore, prepare your answering papers to be split up to the different lecturers (start every new lecturer's section on a new paper).
- Use only one side of the paper.

Points and marking cut-offs:

Total points: 80 p

A	>95%
B	85-95%
C	80-84%
D	70-79%
E	60-69%
Fx	20-59%
F	<20%

No dictionaries, notes or reference books are allowed.

Questions to be marked by Ravi Vumma **Code #.....**
Use these papers for your answers!

1. What are the characteristics of Cushing's syndrome? (2 *points*)

2. Explain how dystrophin contributes to the pathophysiology of muscular dystrophy? (2 *points*)

Questions to be marked by Ravi Vumma **Code #.....**
Use these papers for your answers!

3. Explain the pathophysiology of diabetes insipidus and what are the different forms of diabetes insipidus? (*4 points*)

4. Explain how Rhabdomyolysis occurs? (2 points)

Questions to be marked by Ignacio Rangel **Code #.....**
Use these papers for your answers!

1. Why the ENS is also called the “little brain”? (*3 points*)

2. Describe the organization of the wall of the intestine and mention what is the difference between small and large intestine (*2 points*)

Questions to be marked by Ignacio Rangel **Code #.....**
Use these papers for your answers!

3. Describe the peptic ulcer disease and the role of *H. pylori* in it (*3 points*)

Questions to be marked by Godfried Roomans **Code #.....**
Use these papers for your answers!

1. Describe the physiological role of zinc in the male genital tract, and the role of this element in prostate cancer! *(4 points)*

2. What is “toxemia of pregnancy”? What is a possible reason for this condition to occur, and name at least four organs or organ systems that are affected! (*4 points*)

Questions to be marked by Godfried Roomans **Code #.....**
Use these papers for your answers!

3. Define “endometriosis”. In which female genital organs (outside the uterus) does this occur (name at least two!), what are two reasons for endometriosis to occur, and which population is most affected by endometriosis? (*4 points*)

Questions to be marked by Igor Oliynyk **Code #.....**
Use these papers for your answers!

1. Describe action potential from the Heart pacemaker and Heart muscle cell. Why they are different? (*4 points*)

2. Give definition of tachycardia and explain three basic cellular mechanisms of this condition (*4 points*)

3. What happens to myocardium during the aging? Name and explain three pathophysiological changes associated with aging of myocardium (*4 points*)

Questions to be marked by Igor Oliynyk **Code #.....**
Use these papers for your answers!

4. Name three extracardial effects of Right-sided Heart Failure. (*3 points*)

5. Arterial blood pressure can be measured directly or indirectly. Describe both methods. (*1 point*)

6. Name three predisposing factors associated with thrombo-embolic events (Virchow's triad) (*3 points*)

Questions to be marked by Igor Oliynyk **Code #.....**
Use these papers for your answers!

7. Name at least two subtypes of acute pericarditis based on the character of exudate. (*2 points*)

8. Describe pathogenesis of : (*2 points*)

   a) Hypovolemic Shock

   b) Cardiogenic Shock

Questions to be marked by Igor Oliynyk **Code #.....**
Use these papers for your answers!

9. Explain the role of LDL in pathogenesis of Atherosclerosis (*1 point*)

10. Chronic obstructive pulmonary diseases (COPD) are mainly characterized by presence of two clinical conditions (diseases). Choose one of them and describe etiology and pathophysiologic changes specific for this condition.(*4 points*)

11. Describe the cellular inflammatory events in Asthma (*2 points*)

12. How breathing process is controlled in healthy individuals and in patients with chronic hypercapnia? (*4 points*)

Questions to be marked by Igor Oliynyk **Code #.....**
Use these papers for your answers!

13. Describe the pathophysiology of Parkinson's disease. (*3 points*)

14. Name four clinical symptoms of injuries in the Basal ganglia. (*4 points*)

Questions to be marked by Igor Oliynyk **Code #.....**
Use these papers for your answers!

15. What regions of the cortex are important for: (*3 points*)

    a) Language

    b) Memory

    c) Complex behaviors?

16. Briefly describe the pathogenesis of Epilepsy (*2 points*)

Questions to be marked by Elisabeth Hultgren-Hörnquist **Code #.....**
Use these papers for your answers!

1. What is, as we know today, the pathophysiological process behind coeliac disease? (*4 points).*