**BASICS OF NEUROBIOLOGY**

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1. QUO VADIS –NEUROBIOLOGY?

ORGAN SYSTEMS

ORGANIZATION OF THE NERVOUS SYSTEM

Brief summary:

The first lecture provides some hints about the mission of Neurobiology-related courses.

The second lecture illuminates the organization of the human body and the functional units distinguished.

The third lecture explains the development, the structural and functional organization of the nervous system.

One has gained sufficient knowledge, if understand and can explain the followings:

1) The modular structure of the body

2) The functions required to maintain the body at changing internal and external millieu

3) The role played by the nervous system to ensure survival

Test the knowledge you gained:

1. *Evaluate the following statements for correctness! (True or False) 5 points*

The modules with the highest complexity in the human body are the organs, which are built from multiple cell types rendered to carry out a single action. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The basic unit of structure in every living thing are the cells; the human body is composed of both eukaryotes and prokaryotes. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Multiple organ systems participate in information transmission; these involve e.g. the nervous system, the visceral system, the musculoskeletal system, the lymphatic and immune system. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The nervous system is connected to organs of special senses collecting information from our external environment. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

There is an arrangement in the nervous system, within a structure possesing a higher hierarchical position can influence the one occupying a lower position, but not *vice versa*. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. *Identify the part of the nervous system characterized by the following sentences! 5 points*

It hosts monoaminergic and peptidergic cell groups of the arousal system: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Nuclear complex relaying motor, sensory and limbic information to the cortex: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Part of the CNS exhibiting a columnar shape with 2 enlargements: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Convoluted gyri are formed on the surface of it: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

It controls the pituitary-endocrine axes and autonomic functions: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_