

المستوى الرابع (لائحة الساعات المعتمدة) برنامج البيولوجيا الجزيئية
البيولوجيا الجزيئية للاعصاب (405 ح)

Date: 16/ 1 / 2023

Time: 2 Hour

Mark: 90

الامتحان في ثلاث ورقات

Question One (30 Mark):

Complete the following:

- The nervous system has three functions:.....1.....,.....2.....,.....3.....
- The forebrain parts include:.....4.....,.....5.....,.....6.....
- The brain consists of two types of tissues: ...7.....,.....8.....
- The specialized cells of the nervous tissue are called9..... while the supportive cells are called.....10.....
- Axon arises from11..... of soma of neuron.
- There are ٢٠ types of Astrocytes:...12.....,.....13.....
- Depending on the receptor, binding of neurotransmitters may cause14.....,15....., or16.....of the postsynaptic neuron.
- Neurotransmitters are removed through one of three mechanisms:.....17.....,.....18.....,.....19.....
- Glutamate is synthesized within the brain from ...20.... and via21..... (from glial cells in the brain).
- Synapses can be either ...22.... or ...23.... and are essential to the24..... of neural activity.
- A molecule that binds to a receptor is called a25.....
- Most proteins26... into unique 3D structures. The shape into which a protein naturally folds is known as27.....
- A synapse is a combination of:...28.....,.....29.....,.....30....

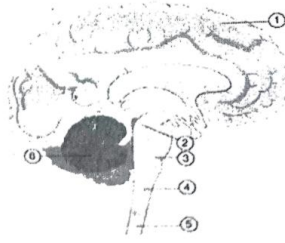
Question Two (20 Marks):

Mention the scientific term:

- 1-.....is a fluid that circulates within the skull and spinal cord, filling up hollow spaces on the surface of the brain.
- 2-.....is a cylindrical bundle of nerve fibers and associated tissues enclosed within the spine and connect all parts of the body to the brain.
- 3-.....is the lateral part of the nervous system that develops from the central nervous system which connects different parts of the body with the CNS.
- 4-.....Tapering and branching extension of soma of neuron.
- 5-.....are phagocytic cells. They engulf pathogens. Thus, serve a defensive role within the nervous system.
- 6-.....unique junction that mediates information flow from one neuron to another or effector cell.
- 7-.....a signaling molecule secreted by a neuron to affect another cell across a synapse.
- 8-.....This is the most common excitatory neurotransmitter of your nervous system.
- 9-..... are your body's natural pain reliever. They play a role in our perception of pain.
- 10-.....are biological transducers that convert energy from both external and internal environments into electrical impulses.

Question Three (20 Marks):

- 1-Mention the name of the parts numbered from 1 to 6.
- 2-Mention the function of each part.

**Question Four (20 Marks):****Write on :**

- 1-Sensory memory
- 2-Short-term memory

With Best Wishes

Dr. lamiaa Deef

Dr. Assmaa harris

Head of Department: Prof.dr. Ola abu samak