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Notes for B.Sc. Part 3rd. Paper  
I (V) A.

Question :- Brain cell ka comparative  
anatomy ka chart aur diagram  
karo?

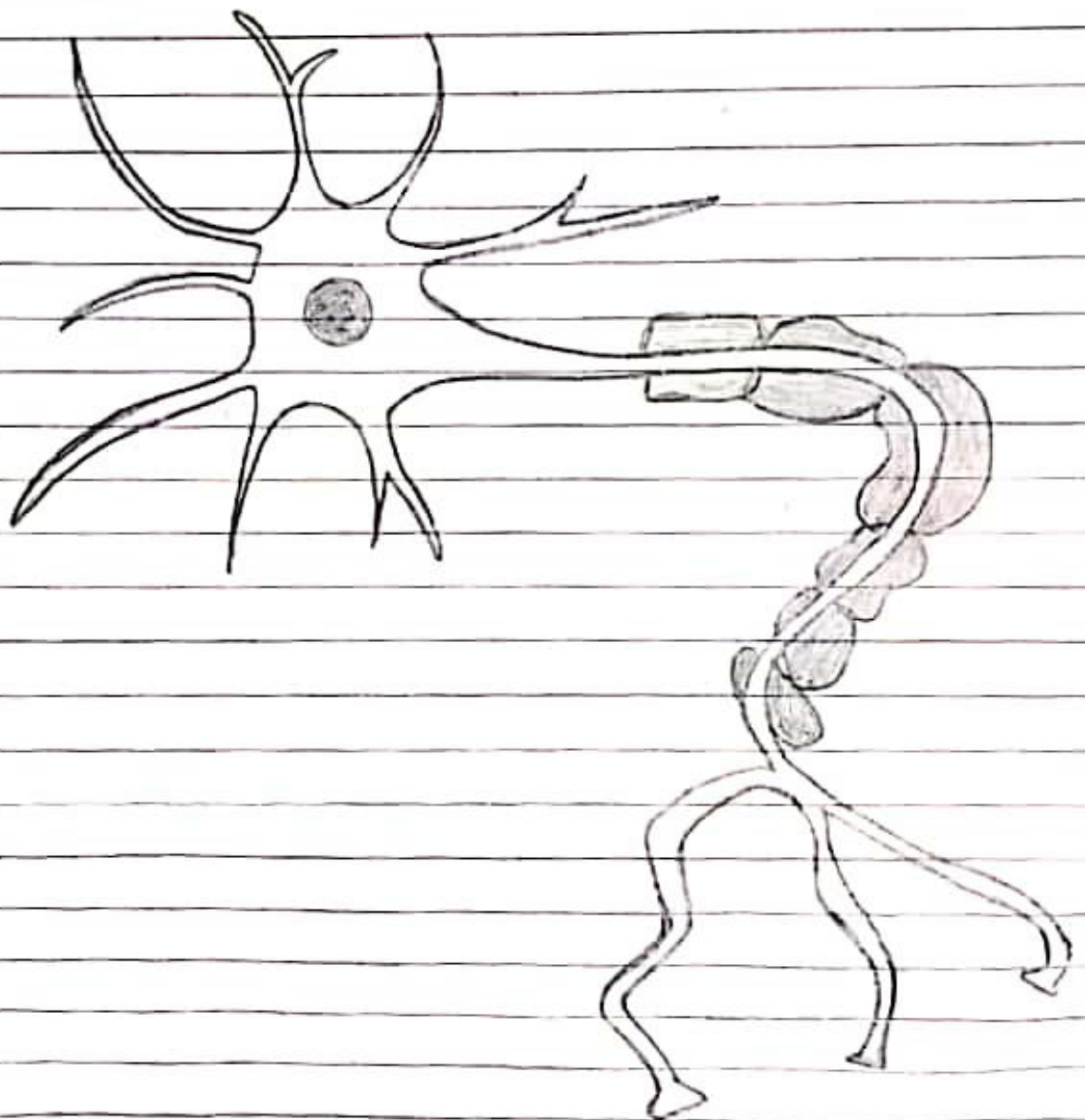
Answer :- A Brain is an organ  
that serves as the center  
of the nervous system  
in all vertebrate and most  
invertebrate animals. It is located  
in the head, usually close  
to the sensory organs for  
senses such as vision.  
It is the most complex  
organ in a vertebrate's  
body. In a human, the  
cerebral cortex contains approxi-  
mately 14-16 billion neurons, and  
the estimated number of  
neurons in the cerebellum is  
55-70 billion. Each neuron is  
connected by synapses to several  
thousand other neurons. These  
neurons, [and the] communication  
with one another by means

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of long protoplasmic fibers called axons, which carry trains of signal pulses called action potentials to distant parts of the brain or body targeting specific recipient cells.



Axon Brain Cell - Free vector graphic on pixabay



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## Identifiers

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NeuroNames 21

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## Anatomical terminology

Physiologically, brains exert centralized control over a body's other organs. They act on the rest of the body both by generating patterns of muscle activity and by driving the secretion of chemicals called hormones. The centralized control allows rapid and coordinated responses to changes in the environments. Some basic types of responsiveness such as reflexes can be mediated by the spinal cord or peripheral ganglia, but sophisticated purposeful control of behavior based on complex sensory input requires the information integrating capabilities of a centralized brain.

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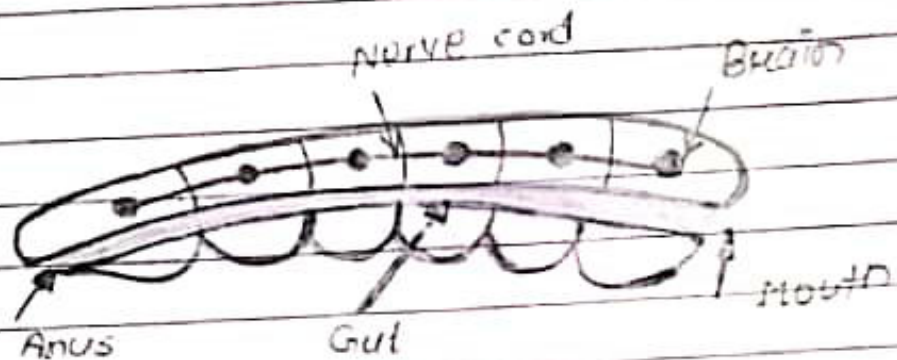
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Evolution :-

Main article : Evolution of the brain

Generic bilaterian nervous system



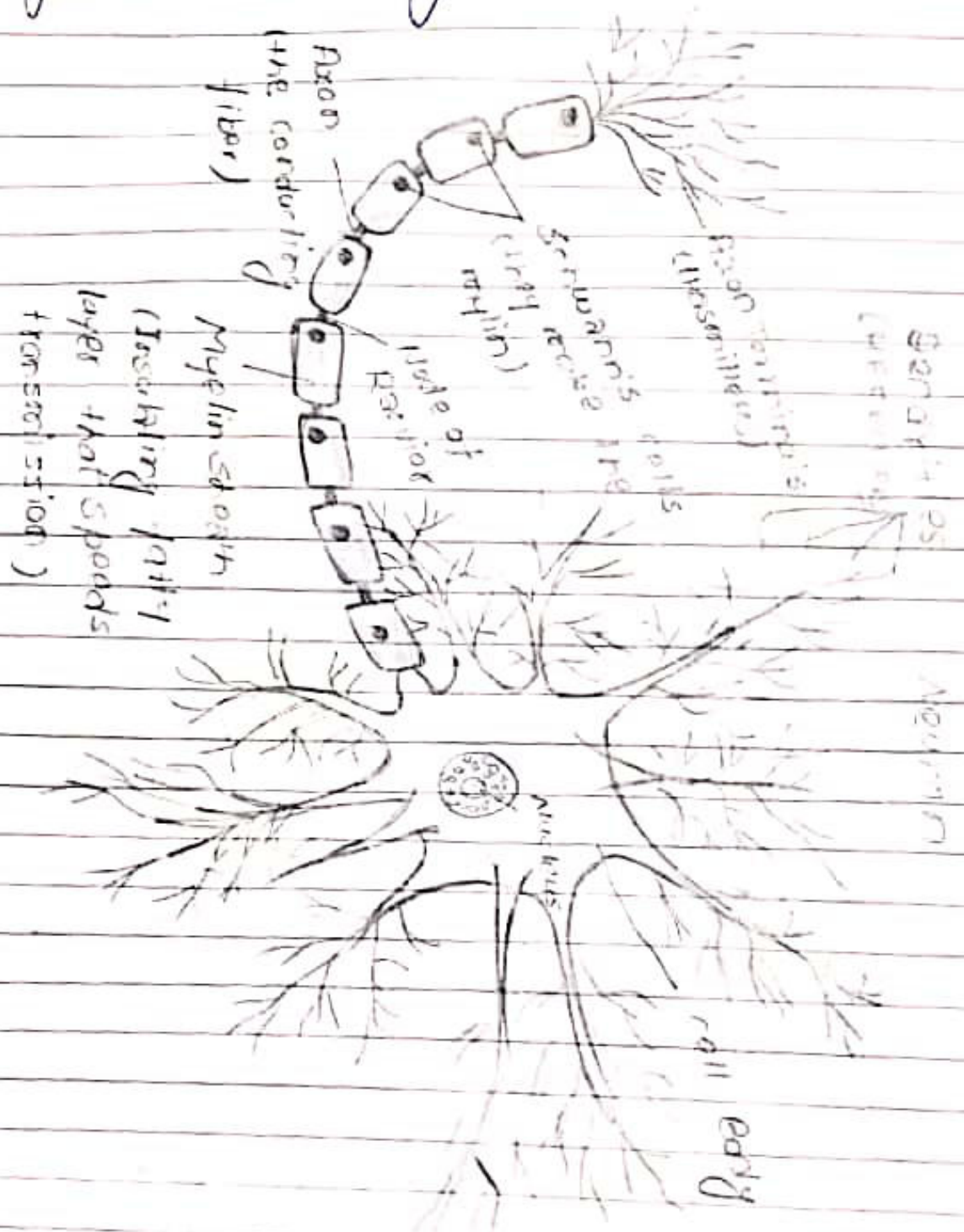
Except for a few primitive organisms such as sponges (which have no nervous system) and ciliates (which have a nervous system consisting of a diffuse nerve net) all living multicellular animals are bilaterians, meaning animals with a bilaterally symmetric body shape that is left and right sides that are approximate mirror images of each other. All bilaterians are thought to have descended from a common ancestor that appeared early in the Cambrian period, 485 - 540 million years ago, and it has been hypothesized that this common



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ancestors had the shape of a simple tubeworm with a segmented body.



Brain are most simply compared in terms of their size.